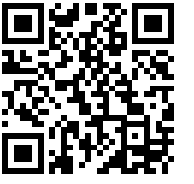
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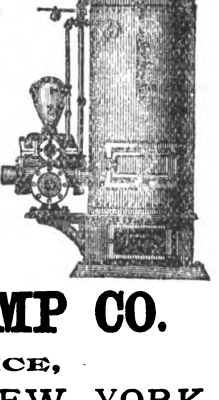
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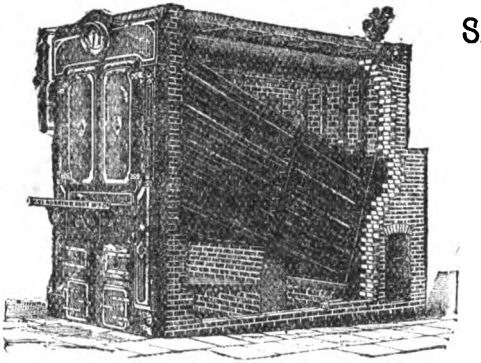
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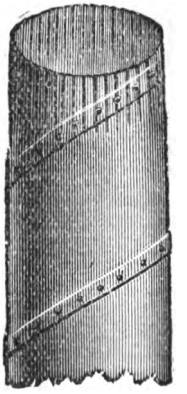
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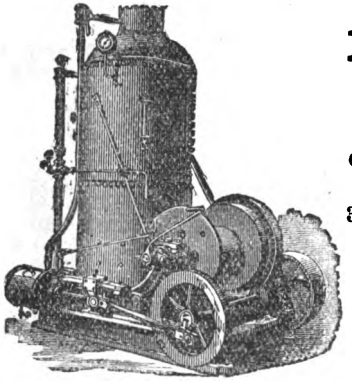
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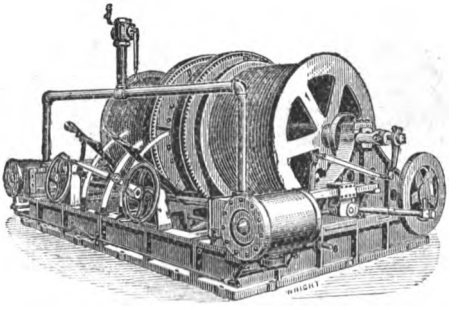
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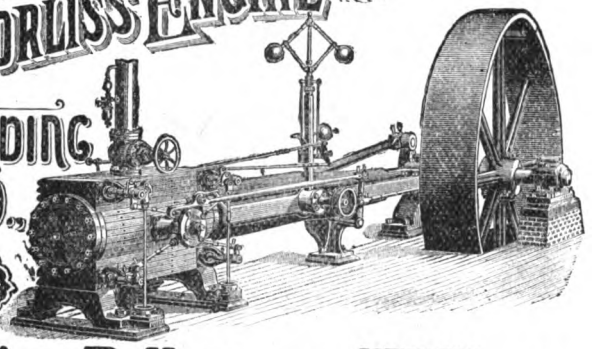
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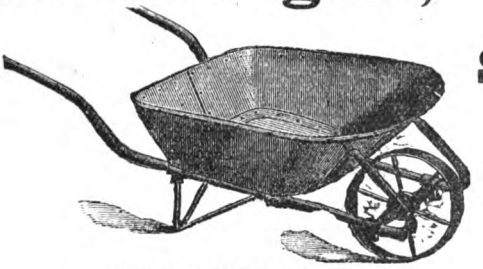
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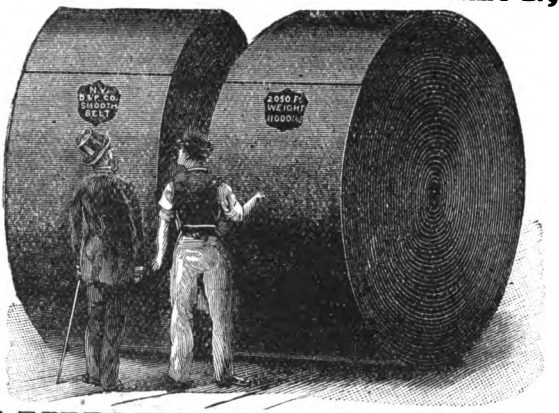
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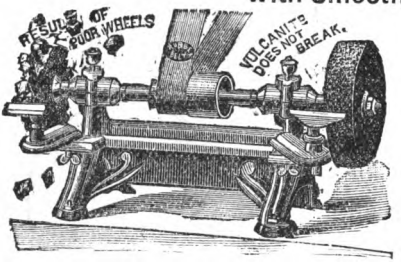
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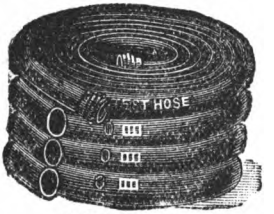
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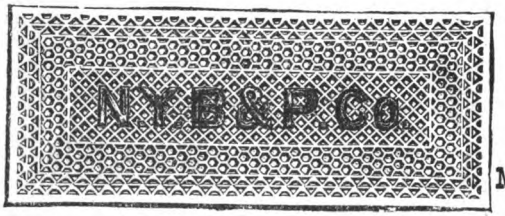
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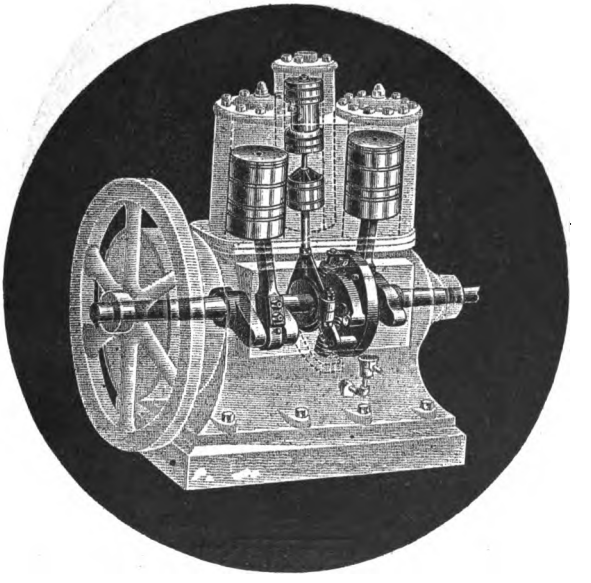
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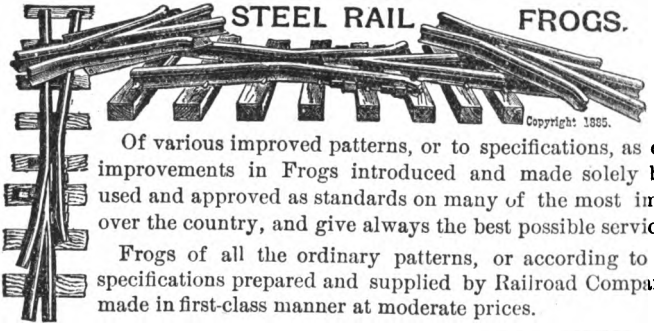
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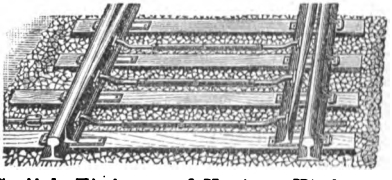
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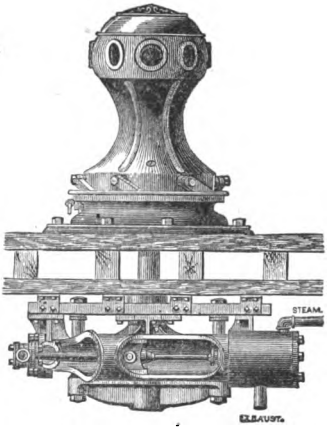
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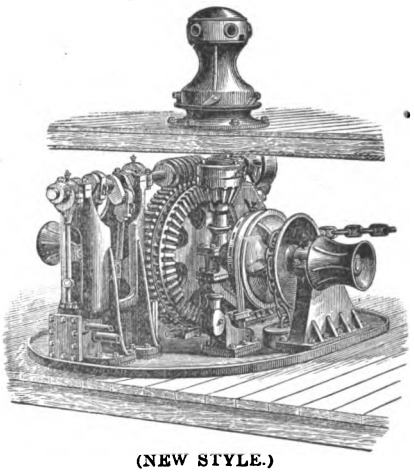
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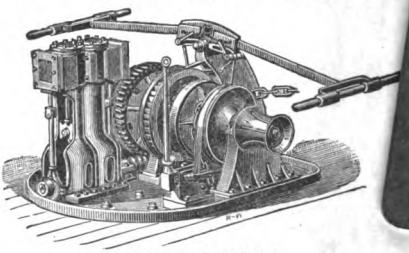


The "Providence" Patent Steam Capstan Windlass.



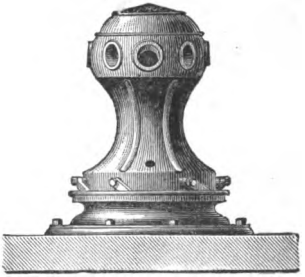
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18 CORTLANDT STREET, NEW YORK.

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PREFACE.

IN presenting this first edition of our Business Directory, we wish to inform the public that we have endeavored, to the best of our ability, to secure accurate lists of firms, companies and individuals engaged in the lines of business represented herein, with the view of producing a Reference Book that will be of actual service to all buyers and consumers of these materials and goods. This has been accomplished by us at a great expense and labor, and while our lists are large, they would have been much larger had we received replies to all of our communications to business houses, Many of our letters of inquiry were unanswered, and any omissions in these lists will likely be owing to that fact.

We shall add to our Directory each year, and we sincerely trust that where parties find they have not been placed properly under appropriate headings, they will do us the favor to call our attention thereto that we may rectify the same in our next edition. We propose to make this a standard annual work, and to place it in the hands of all Railroad, Steamship, Telegraph and Electric Companies, Purchasing Agents, Contractors and Buyers throughout the United States, Canada and Europe. Any suggestions in regard to headings omitted, will be thankfully received by us.

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The interests represented by this Directory are the largest in the world, and we feel that a demand has been created for a work of this character, which will increase each year. Other business directories do not enter upon these particular classes of manufactures in detail to such an extent as to enable those searching for goods (especially Railroad Purchasing Agents and Contractors), to readily find what they are in search of, which defect we have endeavored to overcome.

We solicit correspondence on the above subjects from all parts of the world.

THE RAILWAY DIRECTORY PUBLISHING CO.

August 15, 1888. 18 CORTLANDT ST., NEW YORK.

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* Denotes special headings, where we do not completely cover the manufacture but insert the heading upon request.

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Business Directory.

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ACCUMULATORS.

Accumulators—Electrical.

Electrical Accumulator Co. (The), 44 B'way, N.Y.
Electro-Dynamic Co., of Philadelphia, 234 Carter st., Philadelphia, Pa.
Isolated Accumulator Co., 18 Cortlandt st., N.Y.
Julien Electric Co., 120 Broadway, N. Y.
Tremont Electric Lighting Co., Congress and A sts., Boston, Mass.
Watson & Stillman, 204-210 E. 43d st, N. Y.

Accumulators—High-pressure.

Shaw, Thomas, 915 Ridge ave.. Philadelphia Pa.

Accumulators—Hydraulic.

Robinson-Rea Mfg. Co. (The), 134 Water st., Pittsburgh, Pa.
Watson & Stillman, 204 E. 43d. st., N. Y.

Addressing and Mailing Agency.

Addressing, Duplicating and Mailing Co., 49 Dey st., N. Y. **68.**
Doane, F. V. & Co., 63 University pl., N. Y. **87.**

Air Chambers for Steam Pumps.

Brown & Bros. Tubing and Boiler Works, Waterbury, Conn.
Emory, P. P. & Co., 48 Hampden st., Springfield, Mass.
O'Connell, P. J.,& Son, 179-181 Main st., Springfield, Mass.

Air Compressors.

Am. Mfg. & Supply Co., 12 Dey st., N. Y.
Blake, Geo. F., Mfg. Co., 95-97 Liberty st. N. Y.
Bullock, M. C., Mfg. Co., 138 Jackson st. Chicago, Ill. **10 & 11.**
Burleigh Rock Drill Co., Fitchburg, Mass.
Clayton Air Compressor Works, 43 Dey st., N. Y. **9.**
Colwell Iron Works, 27th st. and North River, N. Y.
Dickson Mfg. Co., Scranton, Pa.
Egelhoff Mfg. Co., cor. Clinton & Oregon sts., Milwaukee, Wis.
Foster, J. M., Washington Bldg., N. Y.

ALARMS.

Garratt, W. T., & Co., Fremont st., San Francisco, Cal.
Guild & Garrison, Brooklyn, N. Y.
Hardick, Chas. B., 120 Plymouth st., B'klyn, N.Y.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Knowles Steam Pump Works, 93 Liberty st., N.Y
Lidgerwood Mfg. Co., 96 Liberty St., N Y. **111.**
Lombard, Geo. R., & Co., Augusta, Me.
McLaren, John, River st., Hoboken, N. J.
McLaughlin, Geo. T. & Co., 120 Fulton st., Boston, Mass.
Moore, S. L., & Son, Elizabeth, N. J.
Morris County Machine & Iron Co., Dover, N. J.
National Drill & Compressor Co., 45 Elm st.. N.Y.
Norwalk Iron Works Co. The), South Norwalk, Conn.
Parke & Lacy, 8 California st., San Francisco, Cal.
Rand Drill Co., 23 Park pl., N. Y. **1.**
Sergeant Rock Drill Co., 16 Dey st., N. Y.
Shaw & Geary, 55 N. 7th St., Philadelphia, Pa.
Tifft, Geo. W., Sons & Co., Buffalo, N. Y.
Wiggs & Bacon, Birmingham, Ala.

Alarms—Electric—Burglar and Fire.

American Automatic Fire Alarm Association, 77 Water st., Boston, Mass.
Applegate Electric Floor Mat Mfg. Co., 35-37 Market st., Camden, N. J.
Arndt Burglar Alarm Co., Jackson, Mich.
Automatic Fire Alarm & Extinguisher Co., 283 Franklin st., Boston, Mass & 294 B'way, N.Y.
Auxiliary Fire Alarm Co., 15 Cortlandt st., N. Y.
Axford Incubator Co. (The), Cottage Grove and 45th st., Chicago, Ill.
Beckford, E. S.. 3 La Grange st., Boston, Mass.
Bogart, Abraham L., 22 Union sq., N. Y.
Bosch, A., Jr., 10 Montgomery st., Newark, N. J.
Boston Electric Co., 548 Washington st., Boston, Mass.
Boston Electric Protective Ass'n, 56 Summer st., Boston, Mass.
Bunnell & Co., J. H., 106 Liberty st., N. Y.
Carr & Co., Spencer E., N. 9th st. cor. Jefferson, Philadelphia, Pa.
C. B. Arsino Electrical Co., 5 E. Court st., Springfield, Mass.
Cincinnati Electric Gas Lighting Co. (The), 6-8-10 E. 4th st., Cincinnati, O.

The numbers following names indicate page on which the firm advertises.

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Cleveland Electric Matting Co., National Bank Bldg, Cleveland, O.
Columbus Electric Supply Store, Columbus, O.
Connecticut District Telegraph and Electric Co., 82 Bank st., Waterbury, Conn.
Connecticut District & Electric Co., 280 Asylum st., Hartford, Conn.
Corwin, W. S., 777 Broad st., Newark, N. J.
District Telegraph & Burglar Alarm Co., 104 W. 125th st., N. Y.
Derby, L. A. & Co., 10 Prescott st., Lowell, Mass.
Detroit Electrical Works, cor. 7th and Woodbridge sts., Detroit, Mich.
Donat, Rudolph F. W., 978 6th ave., N. Y.
Dowden, Geo. A., 841 Broadway, N. Y.
Edwards & Co., E. 144th and 4th ave., N. Y.
Electric Construction & Supply Co. (The), 145 B'way, N. Y.
Electric Fire Protective Co., 15 Cortlandt st., N. Y.
Electric Gas Lighting Co. (The), 35 Arch st., Boston, Mass.
Fricke, J. R. & Co., Herron ave. cor. Iowa st., Philadelphia, Pa.
Gamewell Fire Alarm Telegraph Co., 1½ Barclay st., N. Y., & 27 Federal, Boston, Mass.
Greeley, E. S. & Co., 5 and 7 Dey st., N. Y.
Guest, John H., 181 Pearl st., N. Y.
Harbert, Edward E. & Co., 159 La Salle st., Chicago, Ill.
Harrison & Stamis, 777 Broad st., Newark, N. J.
Heisler Electric Bell & Burglar Alarm Co., St. Louis, Mo.
Helmer, C. W., Columbus, O.
Hemmel, A. Edson, 282 Broadway, New York.
Holmes Burglar Alarm Telegraph Co., 18 Custom House, Providence, R. I.
Holmes Electric Protective Co., 518 B'way, N. Y.
Holmes, E. T. & Co., 220 Devonshire st., Boston, Mass.
Hudson, Wm. H., 3603 3d ave., N. Y.
Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**
Lahy, James, 63 Fulton st., N. Y.
Lyons & Smith, 120 Broadway, N. Y.
Mason, W. S., Attleboro, Mass.
Martin-Wilson Automatic Fire Alarm Co., 53 State st., Boston, Mass.
Meyer, Curt W., 357 4th ave., N. Y.
Municipal Signal Co., 53 State st., Boston, Mass.
National Automatic Fire Alarm Co., 338 B'way, N. Y.
National Mfg. Co., Louisville, Ky.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
N.Y. Automatic Fire Alarm Co., 338 B'way, N.Y.
New York Electric Matting Co., 406 B'way, N.Y.
New York Thermostatic Fire Alarm Co., 338 B'way, N. Y.
Ostrander U. R., & Co., 21 Ann st., N. Y.
Pearce & Jones, 79 John st., N. Y.
Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.
Providence Electric Supply Co., 56 Washington st., Providence, R. I.
Quimby, David S., 30 Vesey st., N. Y.
Redding Electrical Co., 30 Hanover st., Boston, Mass
Rhode Island Telephone & Electric Co., Butler Exchange, Providence, R. I.
Richmond Fire Alarm Co., Richmond, Ind.
Rodgers, Henry, 63 Fulton st., N. Y.
Rosseau's Electrical Works, Railroad ave., N. 138th st., N. Y.
Runkel, H. G., 21 E. 15th st., N. Y.
Schopper, F. D., Race cor. Longworth st., Cincinnati, O.
Shaw & Geary, 55 N. 7th st., Philadelphia, Pa.
Shaw, Thomas, 915 Ridge ave., Philadelphia, Pa.
Smith, A. T., 6 W. 14th st., N. Y.
Smyth & Cook, 853 Broadway, N. Y.
Snyder, James P., 96 Fulton st. N. Y.
Sommer, A., 8 Pearl st., Newark, N. J.
Standard Electrical Works, Pearl, cor. Elm st., Cincinnati, O.
Stewart, A. W., Mfg. Co., Belleville, Ill.
Storey & Wilson, 113 6th ave., N. Y.
Tropp, B., 285 Atlantic ave., Brooklyn, N. Y.
Union Fire Alarm Co., 145 B'way, N. Y.
U. S. Electrical Engineering Co., 18 Wall st., N.Y.
Western Electric Co., 227-251 S. Clinton st. Chicago, Ill.
Wyland Electric Co., 115 B'way, N. Y.
Vassar Burglar Alarm Co., 853 B'way, N. Y.
Zuckschwerdt, H. & Co., 106 St. Marks pl., N. Y.

Alarms—Low Water.

Kessler, W. J., Brooklyn, N. Y.
Love, J. N., 44 Board of Trade Bldg., Chicago, Ill.

Albertypes.

Albertype Co. (The), 60 Reade st, N. Y. **93.**
Forbes Co., 181 Devonshire st., Boston, Mass.

Albo Carbon Lights.

Maryland Meter & Mfg. Co., 766 B'way, N. Y.

Alcohol.

Averill & Thayer, 89 Bedford st., Boston, Mass.
Bay View Distilling Co., San Francisco, Cal.
Graves, C. H. & Sons, 35 Hawkins st., Boston, Mass.
Hahs, Chas. S., 215 N. Broad st., Phila., Pa.
Mills, D. T. & Co., 40 Indiana st., Boston, Mass.
Webb, J. A. & Son, 165 Pearl st., N. Y.
Weber, John J., 2233 N. 4th st., Philadelphia, Pa.

Alcohol—Wood.

Bayless & Berkalen, Binghamton, N. Y.
Drueding Bros., Philadelphia, Pa.
Luther Chemical & Lumber Co., Luther, Mich.
Otto Chemical Co., Williamsport, Pa.
Solomon, L. A. & Bro., 216 Pearl st., N. Y.

Alloy—Manufacturers.

Aluminum Ferro Silicon Co., 50 Oliver st, Boston, Mass.
Illinois Alloy Co., 107 Dearborn st., Chicago, Ill.
Williams Aluminum Co., 95 Liberty st., N. Y.

Analyzers—Chemical.

Ledoux & Co., 10 Cedar st., New York.
Pittsburgh Testing Laboratory (Hunt & Clapp), 95 5th ave., Pittsburgh, Pa. **72.**

Analyzers—Iron and Steel.

Booth, Garrett & Blair, 919 Chant st., Philadelphia, Pa.
Britton, J. Blodget, 339 Walnut st., Philadelphia, Pa.

Anchors and Chains.

Alden, W. G., Camden, Me.
Baker, J. & Co., 79 Commercial st., Boston, Mass.
Bleecker, Augustus & Son, 48 South st., N. Y.
Barstow, Jacob P., 83 Maiden la., N. Y.
Cape Ann Anchor Works, Mason Bldg., Boston, Mass.
Carpenter, Geo. B., & Co., 202 S. Water st., Chicago, Ill. **31.**
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
De Grauw, Aymar & Co., 34 South st., N. Y.
Donaldson, J. P. Co., 22 Woodward ave., Detroit, Mich.
Eastern Forge Co., Portland, Me.
Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.
Jones, Levin, Baltimore, Md.
Lindenschmidt, H. & C., Ingle st. and First ave., Evansville, Ind.
McKnight, Wharton, 44 Penn av., Pittsburgh, Pa.
Pratt & Co., South Glastonbury, Conn.
Standard Iron Co., 4th st. and 9th ave. S., Minneapolis, Minn.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.
Train, Dorr & Co., 76 Comm. st., Boston, Mass.
Whiton, M. F. & Co., 31 Commercial st., Boston, Mass.

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Anchors—Folding and Grappling.

Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
Ferdinand, L. W. & Co., 267 Federal st, Boston, Mass.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.

Angle Bars.

Pencoyd Iron Works, 261 S. 4th st., Philadelphia, Pa.

Aniline Manufacturers.

Albany Aniline Co., Albany, N. Y.
Hudson River Aniline & Color Works, Albany, N. Y.
Heller & Merz, 55 Maiden la., N. Y.
Holliday's, R. Sons, 49 Centre st., N. Y.
Kalle & Co., 172 Pearl st., N. Y.
Metcalf, Theo. & Co., 39 Tremont st., Boston, Mass.
Walpole Dye and Chem. Wks., 46 Oliver st., Boston, Mass.

Annealers.

Healy Iron Works, N. 4th and 5th sts., Brooklyn, N. Y.

Annunciators and Call Bells—Electric.

American Electric Mfg. Co., 208 Pullman Bldg., Chicago, Ill.
Baxter, H. E. & C., 18 Fulton st., Brooklyn, N.Y.
Blodgett Bros. & Co., 63 Kilby st., Boston, Mass.
Bly, C. L., 37 Pearl st., Boston, Mass.
Bogart Abraham L., 22 Union sq., N. Y.
Boston Electric Co., 548 Washington st., Boston, Mass.
Bunnell, J. H. & Co, 108 Liberty st, N. Y.
C. B. Arsino Electrical Co., 5 E. Court st., Springfield, Mass.
Clark, W. C., Portland, Maine.
Connecticut District Telegraph & Electric Co., 280 Asylum st., Hartford, Conn.
Currier Telephone Bell Co., Lowell, Mass.
Derby, L. A., Lowell, Mass.
Detroit Electrical Works, 7th and Woodbridge sts., Detroit, Mich.
Dodsworth, Robert, 1024 Franklin ave., St. Louis, Mo.
Dowden, Geo. A., 841 Broadway, N. Y.
Edwards & Co., 171 Broadway, N. Y.
Electric Construction and Supply Co. (The), 145 Broadway, N. Y.
Electric Gas Lighting Co., 35 Arch st., Boston, Mass.
Fernald, G. M. D., 73 Cornhill, Boston, Mass.
Fowler & Nepil, Des Moines, Iowa.
Fuller, Holtzer & Co., 22 Milk st., Boston, Mass.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Guaranteed Electrical Work Co., 205 Broadway, N. Y.
Harbert, Edward E. & Co., 159 LaSalle, Chicago, Ill.
Hazazer & Stanley, 32 Frankfort st., N. Y.
Hoggson, S. H. & Co., Atlantic Hotel, Bridgeport, Conn.
Holmes Burglar Alarm Telegraph Co., 518 Broadway, N. Y.
Holmes, E. T. & Co., 220 Devonshire st., Boston, Mass.
Jones, E. C. & Bro., 55 Longworth st., Cincinnati, O. **78.**
Krueger, A., 92 7th ave., N. Y.
Lane, J. N. V., Bangor, Maine.
Lyons & Smith, 120 Broadway, N. Y.
Meyer, Curt W., 357 4th ave., N. Y.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
New Haven Clock Co., New Haven, Conn.
Ostrander, W. R. & Co., 21 Ann st., N. Y.
Pearce & Jones, 79 John st, N. Y.
Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.
Redding Electrical Co., 30 Hanover st., Boston, Mass.
Rennie, A. H., 255 Pearl st., N. Y.
Rosseau's Electrical Works, R. R. ave., nr. 138th st., N. Y.
Russell, A. L., 109 Court st., Boston, Mass.
Shaw & Geary, 53 N. 7th st., Philadelphia, Pa.
Standard Electrical Works, Cincinnati, O.
Standard Time & Electric Co. (The), 95 Orange st., New Haven, Conn.
Van Loesecke, M., 471 Main st., Bridgeport, Conn.
Waite and Bartlett Mfg. Co., 204 E. 23d st., N. Y.
Western Electric Co., 70 Trinity pl., N. Y.
Wilkinson, J. & Co., 38 Chardon st., Boston, Mass.
Young, Samuel & Co., Lowell, Mass.
Zimdars & Hunt, 257 Mercer st., N. Y.

Annunciators—Electric (by Storage battery.)

Electrical Accumulator Co. (The), 44 Broadway, N. Y.

Anti-Electric Bells.

Eureka Anti-Elec. Ant. Door and Call Bell Co., 46 School st., Boston, Mass.

Antimony.

Am. Metal Co., 80 Wall st., N. Y.
Blatchford & Co., E. W., Chicago, Ill.
Cooper, Chas. & Co., 194 Worth st., N. Y.
Duval, John & Son, 100 John st., N. Y.
Fearing, Wm. S., 100 Chambers st., N. Y.
Feuchtwanger, L. & Co., 191 Fulton st., N. Y.
Kalbfleisch's, Martin, Sons, 55 Fulton st., N.Y.
Wiarda, John C., 68 Commercial st., Brooklyn, N. Y.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J.

Anvils.

Adams, A. L. Mfg. Co., Cedar Rapids, Iowa.
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
Chicago Scale Co., 147-151 S. Jefferson st., Chicago, Ill.
Claffy, John, 48 Dey st., N. Y. **91.**
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
Donegan & Swift, 174 Fulton st., N. Y.
Eagle Anvil Works, Trenton, N. J.
Fulton Iron & Engine Works, Detroit, Mich.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Illinois Iron & Bolt Co., Carpentersville, Ill.
Jenks, Henry F., 9 Bailey st., Pawtucket, R. I.
Lombard, Geo. R. & Co., Augusta, Ga.
Midvale Steel Co., Philadelphia, Pa.
Rose Pipe Vise Co., 154 E. Lake, Chicago, Ill.

Architects—Naval.

Boston Yacht Agency, 43 Milk st., Boston, Mass.
Burgess, Edward, 22 Congress st., Boston, Mass.

Architects—Railway.

Warren, Clinton J., Ill. Bank Building, Chicago, Ill.

Artesian Well Drillers.

American Well Drilling Co., 118 E. Main st., Louisville, Ky. **23.**
Burr, G. M. & Co., 17 Fenner st., Providence, R. I.
Downie Bros., 1228 Filbert st., Philadelphia, Pa.
Dull, Daniel, Broadway, cor. 51st st., N. Y.
Empire Well Auger Co., Ithaca, N. Y.
Enterprise Drilling Co., 55 21st st., Pittsburgh, Pa.
Gray, John F. Co. (The), 75 N. Clinton st., Chicago, Ill.
Gray, W. H. & Co., 52 Illinois st., Chicago, Ill.
Ireland & Hughes, Pittsburgh, Pa.
Livingston, C. E., 839 N. 22d st., Phila., Pa.
Miller, John P., 45 Michigan st., Chicago, Ill.
Minneapolis Tubular Well Co., 224 Washington ave., N., Minneapolis, Minn.

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Needham & Rupp, Hawthorne ave. cor. Reese, Chicago, Ill.
Oil Well Supply Co. (Ltd). Bradford, Pa.
Orcutt, Geo. H., 619 Walnut st., Phila., Pa.
Robinson. J. E., 2300 Market st., Phila., Pa.
Smith, B. F., 266 Washington st., Boston, Mass.
Snyder & Davis, Canton, O.

Asbestos and Asbestos Materials and Goods.

Asbestos Felting Works, 93-95 Maiden la., N. Y.
Asbestos Packing Co., 33 John st., N. Y.
Asbestos Packing Co. (The), 169 Congress st., Boston, Mass.
Boyd, James, 15 N. 4th st., Philadelphia, Pa.
Carey, Phil. & Co., 270 Broadway, Cincinnati, O.
Chalmers-Spence Co., 419 8th st., New York; Philadelphia, Pittsburgh, Chicago. **iv.**
Chicago Asbestos Mining Mfg. Co., 108 5th ave., Chicago, Ill.
Conkling, S. P., 1 Larned st., W., Detroit, Mich.
Detroit Asbestos Co., 103 Griswold st., Detroit, Mich.
Gilmour, Robt. M., 82 John st., New York.
Goss, J. C., 16 Woodward ave., Detroit, Mich.
Grier, E. Lindsay, 89 Water st., Pittsburgh, Pa.
Greenwood & Martin, Beloit, Wis.
Johns, H. W. Mfg. Co., 87 Maiden la., New York; Chicago and Philadelphia.
Houghton & Beall, 22 Woodward ave., Detroit, Mich.
Osborn, S. J., Jr., S. E. cor. 12th and Plum sts. Cincinnati O.
Peale, W. C. & Bro., 332 Central ave., Cincinnati, O.
Penn. Mfg., Mining & Supply Co., 1004 Penn ave., Pittsburgh, Pa.
Pittsburgh Supply Co., Ltd., 105 Wood st., Pittsburgh, Pa.
Suhr, William M., 96 John st., New York.
Titcomb, Alfred, 42 S. Canal st., Chicago, Ill.
Worcester, Francis, 108 5th ave., Chicago, Ill.
U. S. Felt and Asbestos, 262-263 West st., New York.

*Asbestos Fire Roofing,

Chalmers-Spence Co., 419 8th st., New York. **iv.**

Asphalt and Asphaltum.

Baetjer & Meyerstein, 5 Dey st., New York.
Barber Asphalt Paving Co., Washington, D. C.,
Bolze, Henry, 506 E. 89th st., New York.
Bradbury, H. R., 265 Broadway, New York.
Chichizzola, Paul, 87 S. 5th ave., New York.
Fisher, Erskine W., 18 Broadway, N. Y. **65.**
Lamson, John S. & Bro., 77 Maiden la., New York.
Martin, E. H. & Co., 163 Pearl st., New York.
Moen's Asphaltic Cement Co., 103 Maiden la., New York.
Neuchatel Asphalt Co., Ltd., 265 Broadway, New York.
Osborn, S. J., Jr., S. E. cor. 12th and Plum Sts., Cincinnati, O.
Sasoke, Chas. W., 58 Pine st., New York.
Salomon, L. A. & Bro., 216 Pearl st., New York.
Taylor, Matt & Son., 15 State st., New York.
Warren Chemical & Mfg. Co., 114 John st., New York.
Warren-Scharf Asphalt Paving Co., 114 John st., New York.
Wootton, E. H., 53 Cedar St., New York.

Asphalt Blocks.

Hastings Pavement Co., 140 Pearl st., New York.
Warren-Scharf Asphalt Paving Co., 114 John st., New York.

*Asphalt—German.

Fisher, Erskine W., 18 Broadway, N. Y. **65.**

Asphalt—Importers of

Baetjer & Meyerstein, 5 Dey st., New York.
Fisher, Erskine W., 18 Broadway, N. Y. **65.**
Gabriel & Schall, 205 Pearl st., New York.
Salomon, L. A. & Bro., 216 Pearl st., New York.

Assayers' Materials.

Taylor, John & Co., 65 1st st., San Francisco, Cal. **63.**

*Attorneys-at-Law—R. R. Work a Specialty.

Becker, Wm. H., Fargo, Dak.

Augers—Mfrs.

American Steel Scraper Co., Sidney, O.
Bates & Wilson, 80 Chambers st., New York.
Beecher, F. H., Seymour, Conn.
Brockett, C. A. & Co., Kansas City, Mo. **69.**
Cincinnati Tool Co. (The), Cincinnati, O.
Cloyd, H. C., Union City, Ind.
Collum, R. K., Oxford, Pa.
Connecticut Valley Mfg. Co., Centrebrook, Conn.
Currier Bros., Chesterfield Factory, N. H.
De Witt, Morrison & Kelly, 11 N. 22d st., Philadelphia, Pa.
Diedrick, Z. P., Sherman, Tex.
Drew, C. & Co., Kingston, Mass.
M. L. Edwards Mfg. Co. (The), Salem, O.
Gaunt, M., Indianapolis, Ind.
Humphreyville Mfg. Co, Seymour, Conn.
Jennings, C. E. Co., 81 Reade st., New York.
Lehr Bros., Fremont, O.
New Haven Copper Co., 294 Pearl st., New York
Peterson & Roberts, Moline, Ill.
Pugh, Job. T., 3111 Ludlow st., Philadelphia, Pa.
Russell Jennings Mfg. Co. (The), Deep River, Conn.
Stearns, E. C. & Co., Syracuse, N. Y.
Snell Mfg. Co. (The), Fiskdale, Mass.
Stone, F. L. & Co., Brockton, Mass.
Swan, Jas., Seymour, Conn.
Wood Mfg. Co., Manlius, N. Y.
Ziegler, L. & Co., foot of River st., Rochester, N. Y.

Augers—Pump.

Ames Mfg. Co., Boston, Mass. **64.**

Augers—Square Hole.

Square-Hole Augur Co. (The), Wooster, O.
Quimby, Geo., Wooster, O.

Augers—Well.

Kansas City Frear Stone & Pipe Mfg. Co., Kansas City, Mo.

Awl Manufacturers.

American Awl Co., 195 Front st., Worcester, Mass.
Bartlett Hardware Co., Freeport, Ill.
Bemis & Call, Hardware & Tool Co., Springfield, Mass.
Billings & Spencer Co., Hartford Conn.
Briggs Iron & Tool Co., Findlay, O.
Britton, Joshua & Son, Stoughton, Mass.
Cincinnati Tool Co. (The), Cincinnati, O.
Clifford, Robert, Brockton, Mass.
Ellrich Hardware Mfg. Co. (The), Plantsville, Conn.
Elmwood Tool Co., Harrison & Sprague sts., Providence, R. I.
Empire State Mfg. Co., Buffalo, N. Y.
Foster, Charles G., 114 Monroe st., Lynn, Mass.
George, E. T. & Co., 31 Weybosset st., Providence, R. I.
Hall, Aikman & Co., 44 Park pl., New York.
Humason & Beckley Mfg. Co., New Britain, Conn.
Inman, Chas. H., Natick, Mass.
Johnson, Wm., Newark, N. J.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Conn.
Mayhew, H. H. & Co., Shelburne Falls, Mass.
New England Awl & Needle Co., West Midway, Mass.
Whitten & Lascell, 13 State st., Lynn, Mass.

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Awnings, Tents, Flags and Bunting,

Ahrens & Madison, 357 Milwaukee ave., Chicago, Ill.
Almy & Hieth, New Bedford, Mass.
American Awning, Tent and Oiled Canvas Horse Cover Mfr., 1250 Broadway, New York.
American Awning & Tent Co., Dayton, O.
Anderson & Co., 111 Clay, San Francisco, Cal.
Armstrong, W., 136 Lake st., Chicago, Ill.
Armstrong, E. A., 210 Jeff'n av., Detroit, Mich.
Astrup, W., 1114 Pearl st., Cleveland, O.
Bailey & Humphries, Noank, Conn.
Baker, Howard H. & Co., 18-26 Terrace st., Buffalo, N. Y.
Bakewell, W. H., 2 Isabella st., Alleghany, Pa.
Baptiste, A., 622 N. 3d st., St. Louis, Mo.
Barry, A., Erie, Pa.
Batist, W., 298 8th ave., New York
Batty, J. H. & Co., 10 Forsyth st., New York.
Beare, H. C., Utica, N. Y.
Beers, E., 77 Webster ave., Jersey City, N. J.
Beken, J., 6 Swan st, Buffalo, N. Y.
Berger, L., Bay City, Mich.
Berglund, P. W., 4 Flatbush ave., Brooklyn, N. Y.
Berry, C. R., Portland, Me.
Bertine, Edwin R., 157 Fulton st., N. Y.
Bichweiler & Co., Dayton, O.
Black, A. J, Erie, Pa.
Blackford, A. W., 70 Myrtle ave., Brooklyn, N. Y.
Bloom & Co., 9-13 Woodward av., Detroit, Mich.
Booth, C. H. 868 Park ave., Brooklyn, N. Y.
Bowen, R. S. & Co., 126 State st., Boston, Mass.
Bowman, A. L. & Co., 387 Main st., Worcester, Mass.
Bowman, Henry A. & Co., 88 Front st., Worcester, Mass.
Boyle, John. 201 Fulton st., New York.
Brandt, C. A., 510 Fulton st., Brooklyn, N. Y.
Breymann Bros., Toledo, O.
Brockie, J. & Co., 8 Railroad pl. Newark, N. J.
Brooks, W. F., Lower Bridge, Bridgeport, Conn.
Brown, C. A., Utica, N. Y.
Brown & Co., 9 Terry st., Pittsburgh, Pa.
Broze, E., 1020 Filbert st., Philadelphia, Pa.
Budd, C., 224 Grand st., New York.
Burton, R. C. M., 439 9th st., Washington, D. C.
Burton, W. H., 706 Mission st., San Francisco, Cal.
Callahan, P. J., 66 Avenue B, New York.
Caren, W., 1883 3d ave., New York.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. 31.
Channon, H. Co., 24-26 Market st., Chicago, Ill.
Clark, J. T., 613 Luzerne st., Baltimore, Md.
Clemens Tent & Awning Co., Market, cor. Main st., St. Louis, Mo.
Cohn, L., Akron, O.
Combis & Plassaras, 111 Market st., St. Louis, Mo.
Cook, E. C. & Bro., 40 Dearborn st., Chicago, Ill.
Cook, R. H., 203 Kinzie st., Chicago, Ill.
Copeland, M. G & Co., 643 La. av., Wash'n, D. C.
Coy, A., Grand Rapids, Mich.
Creaser, W., 193 Lincoln st., Boston, Mass.
Croney & Meekins, 139 Franklin st., Balt., Md.
Cunningham, John, 300 E. B'way, N. Y.
Cunningham, J. B., 847 Chapel st., New Haven, Conn.
Curren, F., 354 Fulton st., Brooklyn, N. Y.
Daggett, W. H. H., 71 Asylum st., Hartford, Conn.
Dalton, W. H., 331 7th st., Jersey City, N. J.
D'Arcy, Richard, 152 4th ave., New York.
D'Arcy & Butler, 140 4th ave., New York.
Dayton Awning & Tent Co., Dayton, O.
Dechen, J., 1 New Chambers st., New York.
Decker, C. S., 168 State st., Boston, Mass.
De Grauw, Aymar & Co., 34 South st, N. Y.
Detrick, E. & Co., 19 California st., San Francisco, Cal.
Dickinson, A. F., 200 Joralemon st., B'klyn, N. Y.
Dickinson, A. S., 292 16th st., Brooklyn, N. Y.
Donaldson, J. P. Co. (The), 22 Woodward ave., Detroit, Mich.
Dougherty Bros., 218 Market st., St. Louis, Mo.
Duffy, T., 46 W. 3d st., New York.
Duffy, T., 911 Myrtle ave., Brooklyn, N. Y.
Dunham, H. C., 192 Manhattan ave., Brooklyn, N. Y.
Eastwood, G. A., 204 N. Eden st., Balt., Md.
Eger & Pfeifer, 8th c Main sts., Cincinnati, O.
Elbert, F. & Co., 912 Passy'k av., Phila., Pa.
Elliot, J. & Son, 18 S. Division st., Buffalo, N. Y.
Erickson, A., 38 N. Market st., Boston, Mass.
Evankowich, K., 912 N. 3d st., St. Louis, Mo.
Everts, C. E., 274 S. Water st., Chicago, Ill.
Fennell, J., 1292 3d av., N. Y.
Finney & Channon, 270-272 S. Water st., Chicago, Ill.
Fisher, M., 196 Hudson st., N. Y.
Fletcher & Young, 220 Light st., Balt., Md.
Foster, F. T., 100 Vine st., Cincinnati, O.
Foster, J. H., 443 N. 3d st., Phila. Pa.
Fox, B. F., 1515 South st., Phila., Pa.
Fuhrman, S. J, Scranton, Pa.
Gaffney, T., 400 N. Water st., Phila., Pa.
Gallagher, J., 113 River st., Cleveland, O.
Gautier, J. H., 272 S. 4th st., B'klyn, N. Y.
Gay, T. S., Portsmouth, N. H.
Gentil, S., 636 B'way, San Francisco, Cal.
George, Charles T., 751 6th av., N. Y.
George & Searles, Leadville, Col.
Geran, J. S., Paterson, N. J.
Geran, G. W., 361 Fulton st., B'klyn, N. Y.
Geraty, T., 1245 3d ave, N. Y.
Gibbs, C. M., 101 W. Fayette. N. Y.
Giegerich, G. L., 429 W. 54th st., N. Y.
Gildersleeve, B., 819 9th av., N. Y.
Glawe, C. & Co., Dayton, O.
Gleason, J. H., foot of Fulton st., Troy, N. Y.
Golding, J. C., 87 Cumberland st., B'klyn, N. Y.
Golliffe Mfg. Co., 119 S. 4th st., Phila., Pa.
Goss, J. C., 16-20 Woodward av., Detroit, Mich.
Graff, H. N. & Co., Kansas City, Mo.
Greehy, John, 582 Grand st., N. Y.
Greene, R., Oswego, N. Y.
Haines, J. B., 900 S. 2d st., Phila., Pa.
Haislert, S. J., 817 Market sq., Wash'n, D. C.
Halma, H. P., 26 N. Market st., Boston, Mass.
Hancott, E., 915 N. 13th st., Phila., Pa.
Harris, H. J. Flatbush av. c. St. Marks av., B'klyn, N. Y.
Hartman, John, 40 Crosby st., N. Y.
Harwood & Son, 68 W. B'way, N. Y.
Hayes, D. H., 69 Vestry st., N. Y.
Heede, H. L., 1202 Harlem av., Balt., Md.
Hemmenway, C. F., Asbury Park, N. J.
Hendrickson, P., 37 Henry st., B'klyn, N. Y.
Hilliard, H., 66 Trinity pl., N. Y.
Hite, W. W., 140 4th st, Louisville, Ky.
Hobz & Bamen, 1st c Hudson sts., Hoboken, N. J.
Hoblin, J. W. & Son, 7 W. B'way, N. Y.
Hoffman, W. H., 150 W. B'way, N. Y.
Hohm, M., 137 Union st., B'klyn, N. Y,
Hood, J. R., Old 6 Ferry, Pittsb'g, Pa.
Hooker, E. D., 49 S. 3d, Phila., Pa.
Hooper, F. H., 143 Lexington, Balt., Md.
Horstman Bros. & Co., 5th & Cherry sts., Phila., Pa.
Howard, W. T., 85 De Kalb av., B'klyn, N. Y.
Hoyt, G. T. & Co., 28 N. Market st., Boston, Mass.
Humphrys, R. A., 1006 Ridge av., Phila., Pa.
Hutchins, John, 98 Commercial st., Boston, Mass.
Hutton, J., 49 Flatbush av., B'klyn, N. Y.
Inglis, A., 117 River st., Cleveland, O.
Jackson Awning Co., 227 Market st., Newark, N. J.
Jillson & Folsom, 34 S. Water st., Providence,
Johnson, J. W., 46 N. Wells st., Chicago, Ill.
Joliffe Combined Awning & Blind Co., Balt., Md.
Josephs, J., 376 Water st., Bridgeport, Conn.
Just, C., 52 W. 13th st., N. Y.
Keenan & Co., 423 Buttonwood st., Phila., Pa.
Keilmeyer, H., Columbus, O.
Kelland, W. D., 430 Pearl st., N. Y.
Kelly, M. J., 746 3d av., N. Y.
Kessel, C., 91 Blum, c. Hoboken st., Jersey City, N. J.
Kneale & Davidson, 1239 Case av., Cleveland, O.
Kunkely, M. R., 168 South st., N. Y.

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Lamprell & Marble, 357 Commercial st., Boston, Mass.
Lapointe & Co., 734 3d av., B'klyn, N. Y.
Leavitt, A., Portland, Me.
Lee, R., 305 W. 6th st., Cincinnati, O.
Lilies Mfg. Co., 45 W. Van Buren st., Chicago, Ill.
Lionheart, L., 23 Canal st., N. Y.
Loane, J. W., 15 N. Gay st., Balt., Md.
Lothrop, W. H., 215 Fulton st., B'klyn, N. Y.
Lugton, J. G., 308 W. 6th st., Cincinnati, O.
Luhrs, Christian, 661 Flushing av., B'klyn, N. Y.
Lund, P. W., 302 E. 23d st., N. Y.
Lynch, J., 124 W. B'way, N. Y.
Lynch, W., 535 W. 59th st., N. Y.
Lynch, W. H., 144 State st., Boston, Mass.
Lyon, Wm. J. & Co., 153 Market st., Newark, N. J.
MacKinney, W. E., 2051 Rush st., Phila., Pa.
McAuley, J. A., Columbus, O.
McCaffrey & Co., 37 N. 10th st., Phila., Pa.
McCanlis, T. L. & Co., 286 8th av., N. Y.
McDonnell, R. C., Lancaster, Pa.
McElwee, D., 710 South st., Phila., Pa.
McHugh, J. F., 1250 B'way, N. Y.
McNamara, J. L., Front st., Troy, N. Y.
Magee, M., 147 Fulton st., N. Y.
Mamaux & Son, New 537 Penn av., Pittsb'g, Pa.
Mansfield, G. W., 1229 N. Front st., Phila. Pa.
Manstream, C. O., Elizabeth, c. Richards st., B'klyn, N. Y.
Martain, A., 4 White st., N. Y.
Martin, James & Son, 112 Commercial st., Boston, Mass.
Martin, Thos., 316 Canal st., N. Y.
Marr, T., 86 Ann st., N. Y.
Meaney, M., Lowell, Mass.
Meehan, J., 123 Liberty st., N. Y.
Meehan, M., 578 Hudson st., N. Y.
Milby, P. A., 1639 S. 7th st., Phila., Pa.
Mills, A., 6 Jones la., N. Y.,
Mills, A., 81 S. 8th st., B'klyn, N. Y.
Missouri Tent & Awning Co., 218 Chestnut st., St. Louis, Mo.
Moltzen, H, 123 1st. st., N. Y.
Mooney, G. & Son, 248 E. 23d st , N. Y.
Moore, H. L , 527 S. 3d st., Phila., Pa
Morrison, T., 108 Pine st., St. Louis, Mo.
Morrison, T. J. & Co., Denver, Col.
Mound City Tent and Awning Co., 202 N. Commercial st., St. Louis, Mo.
Murray & Baker, 10 S. Jefferson st., Chicago, Ill.
Nelson, M., 292 State st., Boston, Mass.
Neville & Co., 31 California st., San Francisco, Cal.
Nevins, T. W., Minneapolis, Minn.
New Haven Awning Works, 844 Chapel st., New Haven, Conn.
Nice, J. A., 2630 Coral st., Phila., Pa.
Nicholson, J. A. & Co., 338 N. Gay st., Balt., Md.
Nickerson, L., 6 Commercial st., Boston, Mass.
Noble, T. W., 15-19 Woodward av., Detroit, Mich.
Patten, W. L., Denver, Col.
Palmer, J., 311 Roebling st., B'klyn, N. Y.
Payne, R. J., Crawford, c. S. Water st., Providence, R. I.
Pease, L. F., 84 So. Water st., Providence, R. I.
Pelton, H. W., 2221 Portland av., Chicago, Ill.
Petersen, C., 37 Clinton pl., N. Y.
Plassarn, C. & Co., 311 Market st., St. Louis, Mo.
Powers, M., 15 S. 3d st., St. Louis, Mo.
Pretschold, C., 2937 State st., Chicago, Ill.
Proctor, H. S., 58 S. Salina st., Syracuse, N. Y.
Provost, D. Sons & Co., 18-26 Terrace st., Buffalo, N. Y.
Queen City Awning & Tent Mfy, 264 Main st., Cincinnati, O.
Quinlan, T. J., 271 3d av., N. Y.
Rees, T. H., 175 4th st., Louisville, Ky.
Reilly, P. J., 642 Fulton st., B'klyn, N. Y.
Renner, W., 409 Vine st., Phila., Pa.
Rickettson, W. H., 1363 Wash'n st., Boston, Mass.
Rider, A. J., 110 S. Clinton st., Syracuse, N. Y.
Riley, J. H., 37 N. 7th st., Phila., Pa.
Rippe, C., 19 S. 4th st., St. Louis, Mo.
Robbins & Bradbury, Reading, Pa.
Roberts Bros., 79 Market st., Chicago, Ill.
Ross, W., St. Paul, Minn.
Rowe, W., 200 N. Commercial st., St. Louis, Mo.
Rundy & Son., 190 S. Clark st., Chicago, Ill.
Ryan, F. C., 614 Fulton st., B'klyn. N. Y.
Ryling, J. & Son, 22 E. 8th st., Cincinnati, O.
Sanders, G. W. & Co., 4 S. Commercial st., St. Louis, Mo.
Schoenck, H., 5 W. Willow st., Syracuse, N. Y.
Scott, J. E., 10-12 Woodward av., Detroit, Mich.
Sellars, G. W., Toledo, O.
Sherman, W. P., 96 Court st., B'klyn, N. Y.
Sherman, Wm. P. & Co., 946 B'way, N. Y.
Shewry, J. & Co., Columbus, O.
Shryock, J. J., Meadville, Pa.
Simmons, J. M., 628 W. Baltimore st., Balt., Md.
Simons, G. O., 81 Asylum st., Hartford, Conn.
Simpson, C. M., 94 S. 3d st., Phila., Pa.
Skelton, F., 1325 B'way, N. Y.
Smith. A., 37 N. 6th st., Phila., Pa.
Smith, N. J., 420 8th av., N. Y.
Smith, Wm. E., 350 8th av., N. Y.
Smith, W. J., 121 State st., Rochester, N. Y.
Snow, F. O. & Co., 465 Washington st., Boston, Mass.
Spear, E., 181 Jackson st., Chicago, Ill.
Sproules, J., 12 S. Broad st., Phila., Pa.
Sproules, J. J., 1908 S. 7th st., Phila., Pa.
Sterry, A. N., New London, Conn.
Stevenfeld, G., 25 Springfield av., Newark, N. J.
Stoneman, M. G. & Son, 55 Quay st., Albany, N. Y.
Sullivan Bros., 395 Fulton st., B'klyn., N. Y.
Sullivan, John, 95 Hudson st., N. Y.
Sullivan, M., 485 B'way, B'klyn, N. Y.
Thomas, W. H., 103 B'way, B'klyn, N. Y.
Thompson, Reinertson, 295 Milwaukee av., Chicago, Ill.
Thomson & Vandiver, 21 B'way, Cincinnati, O.
Thorman, W. J., 24 N. 6th st., Phila., Pa.
Toy, R. C., 49 N. 9th st., Phila., Pa.
Travers, A. H., 139 Sycamore st., Cincinnati, O.
Trimm, J. W., 3 Pearl st., Buffalo, N. Y.
Trundy & Co., 59 Broad st., Boston. Mass.
Usborne, H. J., 18 B'way, Cincinnati, O.
Valleau, C. L., 790 8th av., N.Y.
Van Name & King, 205 Long Wharf, New Haven, Conn.
Vouse, G. L. 379 Bowery, N. Y.
Vouse, J. T., 218 Bowery, N. Y.
Vouse, L. N. & Son, 1256 B'way, N. Y.
Wagner, J. & J. R., 163 River st., Cleveland, O.
Wale, J., Jr. & Co., Minneapolis, Minn.
Wartman, W. D., 103 N. 2d, Phila , Pa.
Wayne, J. & Co., Canton, O.
Weber & Lind Sign Co., 109 Wabash av., Chicago, Ill.
Went, Rob't, 205-207 Leonard st., B'klyn, E. D., N. Y.
Weston, J. G., Lawrence, Mass.
Whalen Bros., 279 River st., Troy, N. Y.
Wheeler, J. W. & Co., 64 Commercial st., Boston, Mass.
Wheeler & Gurney, 367 Atlantic av., Boston, Mass.
Whitaker, R., 9 Mattis st., Phila., Pa.
Whiton M. F. & Co., 31 Commercial st., Boston, Mass.
Wilcox, M. I., Toledo, O.
Williams, A. J., Paterson, N. J.
Williams Bros., 6 E. Huron st., Buffalo, N. Y.
Williams, Thomas, 337 Broome, st., N. Y.
Williams, T. & Bro., 44 W. Randolph st., Chicago, Ill.
Williamson, M. A., 2 Decatur st., Phila., Pa.
Wilson, C., 23 S. Canal st., Chicago, Ill.
Winberg, C. C., 38 W. 13th st., N. Y.
Wing, O. M., 1751 Cambridge st., Phila., Pa.
Wise. John H. & Co., 308 E. Pratt st., Balt., Md.
Woodward, T., Concord, N. H.
Woolfolk & Co., 154th st., Louisville, Ky.
Wright, W. A., 208 E. 84th st., N. Y.
Wrightman, G. H , 162 Fulton st., B'klyn, N. Y.
Wunsch, L., 264 Main st., Cincinnati, O.
Yale, R. M. & Co., 29 S. Market st., Boston, Mass.
Zaiser & Stegmann, 26 S. Meridian st., Indianapolis, Ind.
Zittlosen, M., 27 S. Main st., St. Louis, Mo.

The numbers following names indicate page on which the firm advertises.

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Axe Bars.

Northumberland Iron and Nail Works, Van Allen & Co., Northumberland. Pa.

Axes, Hatchet and Adze Mfrs.

Arnold, J. H. & Son, Lyons, Mich.
Bradley, G. W., Westport, Conn.
Briggs Iron and Tool Co., Findlay, O.
Buffalo Hammer Co., Buffalo, N. Y.
Carter & Co., Scranton, Pa.
Clarkson, John W., 28 Reade st., N. Y.
Collins & Co., 212 Water st., N. Y.
Derrick, H. B., Crawfordsville, Oregon.
Douglas Axe Mfg. Co., East Douglass, M.
Douglas Axe Mfg. Co. (The), Boston, M.
Dunn Edge Tool Co., Oakland, Me.
Dunton, A. F., East Saginaw, Mich.
Emerson-Stevens Mfg. Co., Oakland, Me.
Foster Edge Tool Co., Gardner, M.
Francis Axe Co., Buffalo, N. Y.
Hoyt, H. F., Eaton Rapids, Mich.
Hubbard & Blake Mfg. Co., Oakland, Me.
Hubbard & Co., Pittsburgh, Pa.
Hurd, Wm., Liberty, Me.
Jamestown Axe Works, Jamestown, N. Y.
Jeffords Axe Co., Jamestown, Pa.
Johnson, Wm., Newark, N. J.
Kelly, Benj. & Co., Belfast, Me.
Kelly, W. C. & Co., Louisville, Ky.
Knickerbocker, H., Ballston, N. Y.
Lane & Gall, Troy, N. Y.
Long & Co., Pittsburgh. Pa
Loveland Axe Co., Lamar, Pa.
McBain, Thos. A., 640 W. 38th st., N. Y.
Mann, J. Fearon & Co., Bellefonte, Pa.
Mann, R. & Sons, Mill Hall, Pa.
Mann, Jr., Wm. & Co., Lewistown, Pa.
Mansfield, E. & Co., 84 Exchange pl. Bangor, Me.
Michigan Axe and Tool Co., East Saginaw, Mich.
Midvale Steel Co., Nicetown, Pa.
Moore, C. H., 86 St. Clair st., Toledo, O.
New London Scythe Co., Scytheville, N. H.
North Wayne Tool Co., Hallowell, Me.
Peck, A. G. & Co., Cohoes, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Pillsbury, M. M., Napanock, N. Y.
Pillsbury, Marcus M., 85 John st., N. Y.
Price, M., 338 Mulberry st., Newark, N. J.
Romer Bros. Mfg. Co., Gowanda, N. Y.
Rixford, Oscar S., East Highgate, Vt.
Rosser Bros., Mill Hall, Pa.
Russell & Erwin Mfg. Co. (The), 45 Chambers st., N. Y.
Russell, J. B., Napanock, N. Y,
Sager, W. J., Brookville, Pa.
Sallsbury, John & Son, Delphi, N. Y.
Schureman & Hager, 8 Commercial st., Newark, N. J.
Shepherd Hardware Co., Buffalo, N. Y.
Sherman & Co., Belfast, Me.
Trask Bros., Little Falls, N. Y.
Weed & Becker Mfg. Co., 11 Gold st., N. Y.
Weld, Moses, Olamon, Me.
Wetmore, C. I. & Co., Cedar Springs, Pa.
White, G. & Co., Honesdale, Pa.
White, L. & I. J., Buffalo, N. Y,
Williams, Chas. A. & Co., Skowhegan, Me.
Wilson, Walker & Co., Pittsburgh, Pa.
Witham, E. & Son, Carritunk, Me.
Woodrough & Co., Chicago, Ill.

Axle Boxes.

Chester Steel Castings Co., 407 Library st., Phila., Pa. 46.
Hardy, Wm. A., Fitchburg, Mass.
Hewitt Box Lid Co., Chicago, Ill.
Nat. Railway & St. Rolling Stock Co., 194 Washington st., Boston, Mass.; Chicago, New York, Montreal.
Nat. Ry. & Street Ry. Supply Co., 198 Washington st., Boston, Mass.

Axles—Anti-Friction.

Avery, John G., Spencer, Mass.

Axles—Combination Car.

Divided Combination Car Axle Co., Portland, Ore.

Axles—Car and Locomotive.

Ahlborn & Neckermann, Pittsbg'h, Pa.
Ajax Forge Co., Chicago, Ill.
Akron Steam Forge Co., Akron, O.
Allentown Rolling Mills, Allentown, and 237 S. 3d st., Phila., Pa.
Allison Mfg. Co., 32d and Walnut sts., Phila., Pa.
American Axle Works, 12th st. and Montgomery ave., Phila., Pa.
Anchor Brand Axle Works, Sheldon Axle Co., Wilkesbarre, Pa.
Andrews, Frank H., 545 W. 33d st., N. Y.
Anniston Rolling Mill, Noble Bros. & Co., Anniston, Ala.
Atglen Axle & Iron Mfg. Co., Atglen, Pa.
Atlanta Bridge & Axle Co., Atlanta, Ga.
Baltimore Car Wheel Co. (The), Fulton Junction; Baltimore, Md.
Baltimore & Ohio R. R. Co., Cumberland, Md.
Bass Foundry & Machine Works, Ft. Wayne, Ind.
Baugh Steam Forge Co., McMillan Bldg., Detroit, Mich.
Berwick Rolling Mill Co., Berwick, Pa.
Bethlehem Iron Co., Bethlehem, Pa.
Boston Forge Co., Boston, Mass.
Bowler & Co., 10 Winter st., Cleveland, O.
Bridgeport Forge Co., Bridgeport, Conn.
Bridgewater Iron Co., Bridgewater, Mass.
Buffalo Steam Forge, 94 Hayden Bldg., Buffalo, N. Y.
Butterworth & Lowe, Grand Rapids, Mich.
Cape Ann Anchor Works, Gloucester, Mass.
Cambria Iron Co., 219 S. 4th st., Phila., Pa. 2.
Carnegie, Phipps & Co. (Ltd), 48 5th ave., Pittsburgh, Pa.
Catasauqua Mfg. Co., Catasauqua, Pa.
Cayuta Wheel & Foundry Co. (The), Sayre, Pa.
Central Iron & Steel Co., Brazil, Ind.
Chaplin Mfg. Co. (The), Bridgeport, Conn.
Chicago Forge & Bolt Co., 234 Clark st., Chicago, Ill.
Cincinnati Forge and Iron Co., Cincinnati, O.
Cleveland Axle Mfg. Co., Cleveland, O.
Cleveland City Forge & Iron Co., Cleveland, O.
Cleveland Rolling Mill Co., Cleveland, O.
Cole Mfg. Co., Lake Village, N. H.
Colorado Coal & Iron Co., South Pueblo and Denver, Col.
Concord Axle Co., Concord, N. H.
Cuyahoga Forge & Iron Co., Cuyahoga Falls, O.
Dalzell Axle Co., South Egremont, Mass.
De Lancy Forge & Iron Co., Buffalo, N. Y.
De Pere Steam Forge, West De Pere, Wis.
Detroit Bridge & Iron Works, Detroit, Mich.
Dickson Mfg. Co., Scranton, Pa.
Eastern Forge Co., 416 Fore st., Portland, Me.
Ensign Mfg. Co. (The), Huntington, W. Va.
Emmick & Hatcher, Columbus, O.
Erie Forge Co., (Ltd.), Erie, Pa.
Eureka Axle Co., Lynn, Mass.
Felt & Co., Frank B., 234 S. Clark st., Chicago, Ill.
Fort Plain Spring and Axle Works, Fort Plain, N. Y.
Franconia Iron & Steel Works, Wareham, Mass.
Frankford Steel Co., Frankford, Pa.
Gardner & Sons, Carlisle, Pa.
Gould's (C. A.), Buffalo Steam Forge, 24 Hayden Bldg., Buffalo, N. Y.
Gould & Stimson, Buffalo, N. Y.
Green Ridge Iron Works, A. L. Spencer, Scranton, Pa.
Harberton, J. & Sons, Brownsville, Pa.
Hartford Spring and Axle Co., Norfolk, Conn.
Helmbacher Forge & Rolling Mill Co., 5th and Market sts., St. Louis, Mo.
Hogan, John L. & Co., 216 S. 4th st., Phila., Pa.
Houston, Hay & Sons, Conshocton, O.
Howe, A. D. & Co., Conshocton, O.
Hudson River Iron Co., Poughkeepsie, N. Y.

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Hussey, How & Co., (Ltd.), Penn. av. and 17th st., Pittsb'h, Pa.
Ives & Miller, New Haven, Conn.
Jackson & Wooden Mfg. Co., Berwick, Pa.
Johnson Forge Co., Wilmington, Del.
Johnson, J. R. & Co., Richmond, Va.
Kalamazoo Spring & Axle Co., Kalamazoo, Mich.
Kansas City Rolling Mill, Kansas City, Mo.
Keefer Horace A. & Co., Kansas City, Mo. **88.**
Kinsley Iron & Machine Co., Canton, Mass.
Knoxville Car Wheel Co., Knoxville, Tenn.
La Belle Steel Works, Smith Bros. & Co., Pittsburgh, Pa.
Laclede Rolling Mill, St. Louis, Mo.
Lackawanna Iron & Steel Co., Scranton, Pa.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, O.
Lehigh Car, Wheel & Axle Works, McKee, Fuller & Co., Catasauqua, Pa.
Lewisburg Steam Forge Co., Lewisburg, Pa.
Liggett Spring & Axle Co., Pittsburgh, Pa.
Linden Steel Co. (Ltd-), Linden Station, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa
Lima Machine Works, Lima, O.
Litchfield Car & Machine Co., Litchfield, Ill.
Long & Co., 55 Fifth av., Pittsburgh, Pa.
Louisville Steam Forge Co., Louisville, Ky.
Lynchburg Iron Co., Lynchburg, Va.
McKee, Fuller & Co., Catasauqua, Pa.
McMillen, D. C., Newark, N. J.
Macpherson, Willard & Co., Bordentown, N. J.
Michigan Car Co., Detroit, Mich.
Midvale Steel Co., 333 Walnut st., Phila., Pa.
Milton Rolling Mill & Steam Forge, Milton Iron Co., Milton, Pa.
Montour Iron & Steel Co., Danville and 216 S. 3d st., Phila., Pa.
Mowry Car Wheel Works, 27½ W. 3d st., Cincinnati, O.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
National Tubular Axle Co., N. Clinton and Fulton sts., Chicago, Ill.
New Albany Forge & Rolling Mill Co., New Albany, Ind.
New Albany Steam Forge Co., New Albany, Ind.
Noble Bros., Anniston, Ala.
Nova Scotia Forge Co., New Glasgow, N. S.
Offutt & Co., c. Church and Rector sts., N. Y.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Old Fort Iron Mills, Brownsville, Pa.
Otis Iron and Steel Co., Cleveland, O.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Paterson Iron Co., Paterson, N. J.
Peckham Car Wheel Co., Syracuse, N. Y., and 239 B'way, N. Y. **6.**
Pencoyd Iron Works, A. & P. Roberts & Co., 261 S. 4th st., Phila., Pa.
Penn Iron Co., Lancaster, Pa.
Pennsylvania Steel Co., 208 S. 4th st,, Phila., Pa., & Steelton, Pa. **viii.**
Pittsburgh Forge and Iron Co., 10th st. and Penn. av., Pittsburgh, Pa.
Presumpscot Iron Co., Portland, Me.
Prosser, Thomas & Son, 15 Gold st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y.; Phenix Bldg., Chicago, Ill.
Pullman Palace Car Co., Pullman Bldg., Chicago, Ill.
Rhode Island Locomotive Works, Providence, R. I.
Roberts, A. & P. & Co., 261 S. 4th st., Phila., Pa.
Russell Wheel and Foundry Co., Detroit, Mich.
Silver Iron Co., Wm. J. Silver, Salt Lake City, U. T.
Singer, Nimick & Co., Pittsburgh, Pa. **3.**
Sizer, S. W., Steam Forge, Buffalo, N. Y.
Smith Bros. & Co., Pittsburgh, Pa.
Spencer & Price, Scranton, Pa.
Standard Axle Works, Millersburg. Pa.
Standard Steel Works, Lewistown, Pa.
St. Louis Steam Forge and Rolling Mills, A. McDonald & Bro., St. Louis, Mo.
Swift's Iron and Steel Co., Cincinnati, O.
Tallcott, N. W., Axle Works, Brightwood, Mass.
Taylor Iron Works, High Bridge, N. J., 91 Liberty st., N. Y.
Tredegar Iron Works, Richmond, Va.
Troy Steel and Iron Co., Troy, N. Y., 26 B'way, N. Y.
Vulcan Forge and Iron Works, Long & Co., Pittsburgh, Pa.
Ward Axle, Brake and Coupling Co., Monongahela City, & Pittsburgh, Pa.
Wentworth Spring and Axle Co., Gardiner, Me.
Western Forge and Rolling Mills, E. St. Louis, Mo.
Whitney, A. & Sons, Callowhill and 16th sts., Phila., Pa.
Willard Sons & Bell Co., Chicago, Ill.
Williams & Dennison, Greensburg, O.
Winsted Iron Co., Winsted, Conn.
Wood, Smith & Co., Fort Plain, N. Y.
Wood, Wm. W., Wood's Falls, N. Y.
Wurster, F. W., 375 Kent av., Brooklyn, N. Y.

Axles, Clutch.

Baltimore Car Wheel Co. (The), Balt., Md.
Empire Axle Mfg. Co., 32 Nassau st., N. Y.

Axles—Steel Spring.

Smith Bros. & Co., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd), 48 5th av., Pittsburgh, Pa.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**

Axles—Street Car.

Andrews, Frank H., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Fulton Junction, Balt., Md.
Bemis Car Box Co,, Springfield, Mass.
Bowler & Co., Cleveland, O.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, N. Y.: St. Louis, Mo.
Cambria Iron Co., 218 S. 4th st., Phila., Pa.; works at Johnstown, Pa. **2**
Carnegie, Phipps & Co. (Ltd), 48 5th av., Pittsburgh, Pa.
Dederick, Z. P., Sherman, Texas.
Dorner & Dutton, 14 Winter st., Cleveland, O.
Empire Axle Mfg. Co., N. Y.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, 202 Merwin st., Cleveland, O.
Griffin Wheel & Foundry Co., Robey st. and Blue Island av., Chicago, Ill. and Buffalo, N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsb'h, Pa.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler fg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Meysenburg, O. W. & Co., 204 N. 3d st. St. Louis, Mo.; Branch, Phenix Bldg., Chicago, Ill.
Milmine, H. B. & Co., Toledo, O.
Pennsylvania Steel Co., 208 S. 4th st., Phila, Pa. and Steelton, Pa. **viii.**
Pugh & Russell, Stewart Bldg., N. Y.; Phenix Bldg., Chicago, Ill.
Stephenson, John, Co., (Ltd.), 47 E. 27th st., N. Y.; Branch, Phenix Bldg., Chicago, Ill.
Street Ry. Supply Co., Cleveland, O.
Whitney, A. & Sons, Phila., Pa.
Syracuse Tubular Axle Co., Syracuse, N. Y.

Badges and Baggage Checks.

Allen, Howard M., 90 Fulton st., N. Y.
Amer. Railway Equipment Co. (Ltd.), 45 B'way, N. Y.
Buntiug, W. A., 20 5th av., Pittsburgh, Pa.
Childs, S. D. & Co., 163 Dearborn st., Chic., Ill.
Detroit Stencil and Stamp Works, 50 Woodward av., Detroit, Mich.
French, S. A., 400 Broome st., N. Y. **65.**
Hanson, C. H., 35-38 S. Clark st., Chicago, Ill.
Hart & Duff Hat Co., 113 N. B'way, St. Louis, Mo.
Hoggson & Pettis Mfg. Co., 64 Court st., New Haven, Conn.
Hoole Mfg. Co., 46 Bond st., N. Y.
Horstmann Bros. & Co., Phila., Pa.
Jones Stationery and Printing Co., J. M. W., Dearborn and Monroe sts, Chicago, Ill.

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Lamphear, W. K., 22 Washington av. S., Minneapolis, Minn.
McGill Bros. & Co., 304 Dearborn st., Chic., Ill.
Martin, Rufus & Co., 114 Nassau st., N. Y.
Matthews, J. D. & Son, 703d av., Pittsburgh, Pa.
Murdock, James, Jr., 165 Race st., Cincinnati, O.
Reese & Co., S. W., 29 Church st., N. Y.
Rice, H., 40 S. Main st., Dayton, O.
Robbins, John, 58 Kneeland st., Boston, Mass.
Scotford Mfg. Co. (The), 201 Nicollet av., Minneapolis, Minn.
Stafford, Arthur, 35 Beekman st., N. Y.
Stafford, Nelson, 66 Fulton st., N. Y.
Toledo Stamp and Stencil Works, 45 Summit st., Toledo, O.
Universal Rubber Co. (The) 45 Rose st., N. Y.
Weber & Co., 54 5th av., Pittsburgh, Pa.
Wilcox, W. W., 131-133 E. Lake st., Chicago, Ill.
Woodman, R., 169 High st., Boston, Mass.

Ballast Railroad.

Dolese & Shepard, 162 Washington st., Chic., Ill.
Bucyrus Foundry and Mfg. Co., Bucyrus, O.

Ballast Unloaders.

Industrial Works, Bay City, Mich.
Marion Steam Shovel Co. (The), Marion, O.

Barometers, Hydrometers and Thermometers.

Baetz, W., 96 Fulton st., N. Y.
Bahmann & Hoehn, 44 College pl., N. Y.
Bayer & Fletcher, 63 Fulton st., N. Y.
Beck, Albin, 40 Fulton st., N. Y.
Bennett, S., 152 University st., Cleveland, O.
Blank, L. & Co., 142 Woodward av., Detroit, Mich.
Boerlin, Louis, 157 S. State st., Chicago, Ill.
Bonte, P., 111 5th av., Chicago, Ill.
Fairbanks, Brown & Co., 83 Milk st., Boston, Mass.
Gendar, T. V. & Son, 87 Fulton st., B'klyn, N. Y.
Geneva Balance Thermometer Co., Geneva, N.Y.
Greiner, E., 79 Nassau st., N. Y.
Haff & Walbridge, 64 Leonard st., N. Y.
Hawkins & Palmer, 5th c. Race sts., Cincinnati, O.
Hempler, H. H., 453 Penn'a av., Wash'n, D. C.
Hohmann & Maurer, 90 Fulton st., N. Y.
Huddleston, J. S. F., 328 Washington st., Boston, Mass.
Large, Joseph T. & Son, 118 Powers st., B'klyn, N. Y.
Mason, H. H., Springfield, Vt.
Meyer, Curt W., 357 4th av., N. Y.
Muerhead, A., 126 Fulton st., B'klyn, N. Y.
Oswego Thermometer Works, Oswego, N. Y.
Pennelli, Peter, 194 William st., N. Y.
Queen, Jas. W. & Co., 924 Chestnut st., Phila. Pa.
Schaffer & Budenberg, 40 John st., N. Y.
Seipel, John, 90 Park Row, N. Y.
Spooner, E.C., 11 Summer st., Charlestown, Mass.
Stackpole & Bro., 41 Fulton st., N. Y.
Standard Thermometer Co., Peabody, Mass.
Tagliabue, Charles J., 51 Fulton st., N. Y.
Tagliabue Guiseppe, 302 Pearl st., N. Y.
Tagliabue John, 66 Fulton st., N. Y.
Taylor Bros, 14 Hill st., Rochester, N. Y.
Torrey, H., 45 Broad st., Boston, Mass.
Tower, L. C., 40 Exchange st., Rochester, N. Y.
Wassweiler, C. & Co., 167 William st., N. Y.
Weinhagen, Henry, 22 N. William st., N. Y.
Weiss, A. A. & Co., 125 Park Row, N. Y.
Weiss, Neubeck & Kalb, 111 Nassau, st., N. Y.
Wilder, Chas., Petersborough, N. H.

Barrows—Baggage and Depot Trucks.

Chicago Scale Co., 147-151 S. Jefferson st., Chicago, Ill.
Clark, Josiah M., Howell, Mich.
Donegan & Swift, 174 Fulton st., N. Y.
Dyram & Co., 435 Guoin st., Detroit, Mich.
Fairbanks, Morse & Co., Lake and LaSalle sts., Chicago, Ill.
Fairbanks & Co., 26 S. Meridan sts., Indianapolis, Ind.
Kalamazoo R. R. Velocipede Co., Kalamazoo, Mich.
Kilbourne & Jacobs Mfg. Co., Columbus, O. **2.**
LaFayette Car Works, LaFayette, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.
Osborn & Co., Hamilton, Conn.
Penfield Tackle Block Co., Lockport, N. Y.
Richte Bros., 50 S. 4th st., Phila., Pa.
Whitman Agricultural Co., 8th st. and Clark av., St. Louis, Mo.

Barrows—Coal and Coke.

Arnold, D. J. C., New London, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Donegan & Swift, 174 Fulton st., N. Y.
Hubbard, H. N., 313 E. 22d st., N. Y.
Hunt & Co., C. W., 111 B'way, N. Y.
Kilbourne & Jacobs Mfg. Co. (The), Columbus, Ohio. **2.**
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Michigan Brick & Tile Works, Morenci, Mich.
Pollock, Alex., 212 West st., N. Y. **32.**
Sharon Boiler Works, Sharon, Pa.
Steubner & Woods, 168 E. 3d st., Hunters Point, N. Y.
Tubular Barrow & Machine Co., 212 West st., N. Y. **32.**
Tubular Barrow & Machine Co., 169 14th st., Jersey City, N. J.

Barrows—Sawdust.

Lansing Wheelbarrow Co., Lansing, Mich.

Batteries—Electric and Storage.

Ahlstrom, O. G., 162 William st., N. Y.
Anderson, Homer, Peekskill, N. Y.
Ansonia Brass & Copper Co., 19 and 21 Cliff st., N. Y.
Applegate's Electric Floor Mat Mfg. Co., 35 Market st, Camden, N. J.
Auburn Electrical Supply Co., Auburn, N. Y.
Boston Electric Co., 548 Washington st., Boston, Mass.
Brush Electric Co. (The), Cleveland, O.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Chemical Electric Light & Power Co., 109 Court st., Boston, Mass.
Colburn, I. W. & Co., Fitchburg, Mass.
Eddy Electric Mfg. Co., 42 Union pl., Hartford, Conn.
Electrical Accumulator Co., 44 B'way, N. Y.
Electric Gas Lighting Co., 35 Arch st., Boston, Mass.
Electro-Dynamite Co., of Phila., 224 Carter st., Phila., Pa.
Fuller & Holtzer, 27 Arch st., Boston, Mass.
Gibson Electric Co., 775 Greenwich st., N. Y.
Greeley, E. S. & Co., 5 and 7 Dey st., N. Y.
Henzel, Geo. L., San Francisco, Cal.
Jones, C. E. & Bro., 55 Longworth, st., Cincinnati, O. **78.**
Julien Electric Co., 120 B'way, N. Y.
Law Telephone Co., 112 Liberty st., N. Y.
Leclanche Battery Co., 149 W. 18th st., N. Y.
Meyer, Curt W., 357 Fourth av., N. Y.
Moore Bros., 108 Liberty st., N. Y.
National Carbon Co., Cleveland, O.
National Galvanic Battery Co., 18 Courtlandt st., N. Y.
Novelty Machine Works, Wellsville, O.
Partrick & Carter, 114 S. 2d st., Phila., Pa. **69.**
Pearce & Jones, 79 John st., N. Y.
Pittsburgh Electric Co., 213 Wood st., Pitts'bg, Pa.
Reynders, John & Co., 303 Fourth av., N. Y.
Rhode Island Telephone & Electric Light Co., Providence, R. I.
Robert-Brevoort Electric Co. (Ltd), 206 B'way, N. Y.
Schoverling, A., 111 Chambers st., N. Y.
Southern Electric Co., Baltimore, Md.
Standard Carbon Co., Cleveland, O.
Standard Electric Time Co., 342 State st., New Haven, Conn.

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Standard Electrical Works, Cincinnati, O.
Thill's, F. Sons & Co., 104 Kent av., Brooklyn, N. Y.
Tremont Electric Light Co., 10 Mt. Washington av., Boston, Mass.
Union Indurated Fibre Co., 37 Barclay st., N. Y.; 39 Wabash av., Chicago, Ill.
Western Electric Co., Chicago, Ill.; 70 Trinity pl., N. Y.
Whitney Glass Works, 227 S. Front st., Phila., Pa.; 35 Murray st., N. Y.

Batteries—Electric Blasting.

Ætna Powder Co., 98 Lake st., Chicago, Ill. **8.**
Clayton's Air Compressor Works, 43 Dey st., N. Y. **9.**
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Kirk, Arthur & Son, 910 Duquesne way, Pittsburgh, Pa.
Lafiin & Rand, 29 Murray st., N. Y.
Rendrock Powder Co., 23 Park pl., N. Y. **1.**

Batteries—Medical.

Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**

Bearings—Railroad and Journal.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.; 115 B'way, N. Y.
Ajax Metal Co. (The), 2040 N. 10th st. Phila., Pa.
American Bronze Works, 48 Columbus st., Cleveland, O.
Andrews, Frank H., 545 W. 33d st., N. Y.
Atlas Bronze & Truyere Co. (Ltd), 2829 Smallman st., Pittsburgh, Pa.
Baker Car Bearing Co., 212 W. 53d st., N. Y.
Baker Adjustable Bearing Co., 35 Wall st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.
Barrett Mfg. Co., 8 Oliver st., Boston, Mass.
Barrett Mfg. Co., Springfield, Mass.
Bemis Car Box Co., Springfield, Mass.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Carbon Bronze Co., 38 Water st., Pittsburgh, Pa.
Chaplin Mfg., Co. (The), Bridgeport, Conn.
Chaplin Mfg. Co., 69 Wall st., N. Y.
Damascus Bronze Co., Pittsburgh, Pa.
Dederick, Z. P., Sherman, Texas.
Dickson Mfg. Co., Scranton, Pa.
Elkins Mfg. & Gas Co., 617 Arch st., Phila., Pa.
Ensign Mfg. Co. (The), Huntington, W.Va.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, Cleveland, O.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Greeley (The), E. S. & Co., 5 and 7 Dey st., N. Y.
Greene, G. W. & B. F. & Co., 41 and A. V. R. R., Pittsburgh, Pa.
Hardy, Wm. A. Fitchburg, Mass.
Heiser, J. W., 46 Columbus st., Cleveland, O.
Higley Car Journal Co., Herald, c. Dell st., Cleveland, O.
Hopkins, D. A., 113 Liberty st., N. Y.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.
Jordan, F., 200 Broadway, N. Y.
Kansas City Car & Wheel Co., Reals Bldg, Kansas City, Mo.
Keystone Smelting Co. (The) Ltd., 33d st., Pittsburgh, Pa.
Kinzer & Jones, 37 Penn av., Pittsburgh, Pa.
Lewis & Fowler Mfg. Co. (The), 27 to 35 Walworth st., Brooklyn, N. Y.
Lima Machine Works, Lima, O.
Laclede Car Co., 4500 W. 2d st., St. Louis, Mo.
Magnolia Anti-Friction Metal Co., 102 Chambers st., N. Y.
Martin Rufus & Co., 114 Nassau st., N. Y.
Meneely & Co., Geo. R., West Troy, N. Y. and Atlanta, Ga.
Meysenburg, O.W. & Co., 214 N. 3d st., St. Louis, Mo., (Branch) Phenix Bldg, Chicago, Ill.
Miller, Chas. B., 541 W. 32d st., N. Y.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
Mowry & Phillips, 120-134 Cross st., Boston, M.
North American Metaline Co., 33 Bleecker st., N. Y.
Philadelphia Smelting Works, 455-457 N. 12th st., Phila., Pa.
Phosphor-Bronze Smelting Co., 512 Arch st., Phila., Pa.
Pioneer Brass Works, 1105 Penn st., Indianapolis, Ind.
Pioneer Brass Works, 112 S. Penn st., Indianapolis, Ind.
Pittsburgh Smelting Co., 13th st., Pittsb'g, Pa.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg, N. Y., Phenix Bldg, Chicago, Ill.
Reeves, Paul S., 700 S. Broad st., Phila., Pa.
Richmond Bronze & Brass Works, Richmond, Va.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Shoemaker Mfg. Co., Dalton, Pa.
Stephenson, John Co., (Ltd), 47 E. 27th st., N. Y., (Branch) Phenix Bldg, Chicago, Ill.
Stewart & Mattson Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.
Stinard, S. R., Pompton, N. J.
St. Paul Brass Works, St. Paul, Minn.
Street Ry Supply Co., Cleveland, Ohio.
Tyler B.os., 8 Oliver st., Boston, Mass.
Timms' Car Coup. & J. B. Co., Columbus, Ohio.
Tubal Smelting Works, 762 S. Broad st., Phila., Pa.
Thayer Mfg. Co., 244 S. Clark st., Chicago, Ill.
Thayer Mfg. Co., 241 Greenfield av., Milwaukee, Wis.
White, Edward C., 531 W. 33d st., N. Y.
Williams, E. A. & Son, 107, 109 & 111 Plymouth st., Jersey City, N. J.
Wolverine Bronze Works, 66 Fort st., E., Detroit, Mich.

Bell Cord and Bell Cord Couplings.

Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Combined Electric & Trip Bell Cord Co., 154 E. Lake st. (R: 16), Chicago, Ill.
Diamond Twine Co., Xenia, O.
Elizabethport Steam Cordage Co., 46 South st., N. Y. **20.**
Flocker, John & Co., Allegheny, Pa.
Tolman, J. P. & Co. (Samson Cordage Works), 164 High st., Boston, Mass. **47.**
Ossawau Mills Co., Norwich, Conn.
Sellers, Morris & Co., Chicago, Ill.
Silver Lake Co. (The), W. Wellington, agt., 82 Chauncey st., Boston, Mass.
Walls, Wm. Sons, 113 Wall st., N. Y.

Bell Cords—Electric (by Storage Battery).

Electrical Accumulator Co. (The), 44 B'way, N.Y.

Bellows Man'f'rs.

Bailey Mfg. Co., 64 W. 3d st., Cincinnati, O.
Beggs, J. & Co., 9 Dey st., N. Y.
Buchner, J. K., 167 Delancey st., N. Y.
Bullock, T. H., Bellows & Forge Co., 85 Columbus st., Cleveland, O.
California Bellows Mfg. Co., 32 Fremont st., San Francisco, Cal.
Churchyard, J., 650 Clinton st., Buffalo, N. Y.
Christen, F., 1418 Biddle st., St. Louis, Mo.
Claffy, John, 48 Dey st., N. Y. **21.**
Donegan & Swift, 174 Fulton st., N. Y.
Evenden, J. N., 810 N. Levee st., St. Louis, Mo.
Ewing, Mitchell & Co., 14 Wood st., Pittsbg'h, Pa.
Gunter, A. J. & Co., 614 Main st., Cincinnati, O.
Hill, J., 298 Courtlandt st., Cleveland, O.
Honchin Mfg. Co., 29 Warren st., N. Y.
Keith, G. P., Lima, Ind.
Keller, H., Tell City, Ind.
Louisville Bellows Co., 36 5th st., Louisville, Ky.
McKenne, H., 566 Mission st., San Francisco, Cal.

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Metz. G. N. & Sons, 909 Market st., Phila., Pa.
Michales', J., Son & Co., 38 Commerce st., N. Y.
Obermayer, S. Foundry Supply Mfg. Co. (The), Cincinnati, O.
Parkhurst & Wilkinson, 142 Kinzie st., Chicago, Ill.
Pittsburgh Bellows Works, 1128 Penn av., Pittsburgh, Pa
Reese, C. H., 4 Gold st., N. Y.
Reimer, G., 233 South st., N. Y.
Rhein, H. S., Reading, Pa.
Rossen. G. W., 180 Greene st., Louisville, Ky.
Scott, Geo. M., Johnson, c. W. 22d st., Chicago, Ill.
Storrey, J. F., 462 Washington av., Albany, N. Y.
Vought & Williams, 193 West st., N. Y.
Woodson, Thomas, 74 Canalport av., Chicago., Ill.

Bell Founders—Ship, Steamboat and Locomotive.

American Ring Co., Waterbury, Conn.
Barnes, H. W., Bristol, Conn.
Barton Bell Co. (The), East Hampton, Conn.
Bell, C. S. & Co., Hillsboro, O.
Bevin Bros. Mfg Co., East Hampton, Conn.
Blake, Wm. & Co., Brighton, c. Allen st., Boston, Mass.
Blake, Lamb & Co., Meadow st., Waterbury, Conn.
Bleedorn, W., Watertown. Minn.
Blymyer Mfg. Co., 664 W. 8th st., Cincinnati, O.
Bradley & Hubbard Mfg. Co., 21 Barclay st., N. Y.
Bradley & Hubbard Mfg. Co., Meriden, Conn.
Carbon Bronze Co. (Ltd.), 38 Water st., Pittsb'g, Pa.
Chapman W. H. & Co., Middletown, Conn.
Chapman Mfg. Co., Britannic st., Meriden, Conn.
Clark, J. C., Middle Haddam, Conn.
Clark, R. S. & Co., Mount Carmel, Conn.
Clark & Elliot, Newcomerstown, O.
Cincinnati Bell Foundry Co., Cincinnati, O.
Connell, J. P., Berlin, Conn.
Dockray C., Zanesville, O.
East Hampton Bell Co., East Hampton, Conn.
Fuller F., 436 S. Main st., Providence, R. I.
Fulton's, A. Son & Co., 91 1st av., Pittsb'g, Pa.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Globe Brass & Bell Foundry, 292 Howard st., San Francisco, Cal.
Gong Bell Mfg. Co., East Hampton, Conn.
Gregory, James, Cannon, c. Stanton, st., N. Y.
Greenberg. M., 205 Front st., San Francisco, Cal.
Goulds Mfg. Co., 60 Barclay st.. N. Y.
Harrington, W. S., Belleville, O.
Hissler, A., 192 Dumaine st., New Orleans, La.
Holbrook & Son, Medway, Mass.
Holmes, Booth & Haydens, Waterbury, Conn.
Hotchkiss, G. M. & Co., West Haven, Conn.
Hudson Auto. Locomotive Bell Ringer Co., Dubuque, Iowa.
Jenny & Manning, Washington C. H., Ohio.
Jersey City Smelting Works, 107 Plymouth st., Jersey City, N. J.
The Jones & Co., Troy Bell Foundry, Adams, c. 1st st., Troy, N. Y.
Kaye & Co., 132 Water st., Louisville, Ky.
Kentucky Bell Co., Louisville, Ky.
Kirby, Samuel, Middletown, Conn.
McShane, H. & Co., 441 North st., Balt., Md.
Martin, Rufus & Co., 114 Nassau st.. N. Y. **52.**
Meneely, Clinton H. Bell Co., 22 River st., Troy, N. Y.
Meneely, Clinton H., Bell Co., Troy, N. Y.
Mish Bros., Lebanon, Pa.
Post & Co., Cincinnati, O.
Providence Brass Foundry, 460 Eddy st., Providence, R. I.
Regester, J. & Sons, Holliday & Saratoga, Balt., Md.
Root. S. E. & Co., Bristol, Conn.
Rumsey & Co. (Ltd), 19 Dey st., N. Y.
The Star Bros. Bell Co., East Hampton, Conn.
Thayer Mfg. Co., 241 Greenfield av., Milwaukee, Wis.
Torrey, J. G. & Son, 180-182 Main st., Rockland, Me.
U. S. Supply Co., The, (Ltd), 51 John st., N. Y.
Vansands, H. H., 733 B'way, N. Y.
Van Duzen & Tift,. 164 E. 2d st., Cincinnati, O. **57.**
Wall Mfg. Co., Cobalt, Conn.
Warden, McClelland & Co., 25 B'way, Cincinnati, Ohio.
Watrous, J. L. & Co., East Hampton, Conn.
Weeks, A. A., 11 Gold st., N. Y.
Western Bell & Metal Co., 1312-1314 S. 2d st., St. Louis, Mo.
Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.
Williams, E. A. & Son, 107-111 Plymouth st., Jersey City, N. J.
Wilmot & Hobbs Mfg. Co. (The), Railroad, c. Hancock av., Bridgeport, Conn.

Bells—Electric.

Adams, Geo. H. & Co., 174 Broad st., Providence, R. I.
Applegate Electric Floor Mat Mfg. Co., Camden, N. J.
Barton Bell Co. (The) East Hampton, Conn.
Beckford, E. S., 3 La Grange st., Boston, Mass.
Boston Electric Co., 550 Washington st., Boston, Mass.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
C. B. Arsirio Electrical Co., Springfield, Mass.
Derby, L. A. & Co., Lowell, Mass.
Detroit Electrical Works, Detroit, Mich.
Dowden, Geo. A., 841 B'way, N. Y.
Fuller, Holtzer & Co., 27 Arch st., Boston, Mass.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
New England Wiring & Con. Co., 244 Washington st., Boston, Mass.
Pearce & Jones, 79 John st., N. Y.
Rhode Island Telp. & Elec. Co., Providence, R. I.
Rosseau's Electrical Works, R. R. av., n 138th st., N. Y.
Russell, S. L., 109 Court st., Boston, Mass.
Shaw & Geary, 53 N. 7th st., Phila., Pa.
Standard Electrical Works, Cincinnati, O.
Wesson, Samuel, 34 Southbridge st., Worcester, Mass.
Western Electric Co., 227-251 S. Clinton st., Chicago, Ill.
Wilmot & Hobbs Mfg. Co., Bridgeport, Conn.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J.
Zindars & Hunt, 237 Mercer st., N. Y.

Bells—Gong.

Barton Bell Co. (The), East Hampton, Conn.
Bevin Bros. Mfg. Co., East Hampton, Conn.
Chapman Mfg. Co. (The), Meriden, Conn.
East Hampton Bell Co., East Hampton, Conn.
Gong Bell Mfg. Co., East Hampton, Conn.
Jones Troy Bell Foundry Co. (The), Troy, N. Y.
The Starr Bros. Bell Co., E. Hampton, Conn.
Van Duzen & Tift, 102 East 2d st., Cincinnati, Ohio. **57.**
Williams, E. A. & Son, 109 Plymouth st., Jersey City, N. J.

Bells—Street Car.

Bevin Bros. Mfg. Co., E. Hampton, Conn.
Martin Rufus & Co., 114 Nassau st., N. Y.
Star Bell Co., Easthampton, Mass.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J.

Bell Ringers—Locomotive, Automatic.

Cook & Strong, Danville, Ill.

Bell Fasteners.

Buffalo Specialty Mfg. Co., 14-24 Wells st., Buffalo, N. Y.
Champion Belt Hook Co., 120 Liberty st., N. Y.
Claflen Mfg. Co. (The), 71-73 Ontario st., Cleveland, O.
Stanley, W. R. & Co., Wellington, O.

The numbers following names indicate page on which the firm advertises.

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Belt Hooks.

Browning, Sisum & Co., 85 Chambers st., N. Y.
Champion Belt Hook Co., 110 Liberty st., N. Y.
Edwards, H. P. & Co., Detroit, Mich.
Gates, Josiah & Sons, Dutton, c. Market st., Lowell, Mass.
Harris & Locke Mfg. Co., 10 Lafayette st., Salem, Mass.
E. Jenckes Mfg. Co., Pawtucket, R. I.
Lindsey, Geo. M., 95 S. Sharp st., Balt., Md.
Talcott, W. O., 33 Beverly st., Providence, R. I.

Belting—Chain.

Jeffrey Mfg. Co., 151 W. State st., Columbus, O.
Lechner Mfg. Co. (The), Columbus, O.
Roller Chain Belting Co., Columbus, O.

Belting—Coiled Wire.

Coiled Wire Belting Co. (The), 91 Cliff st., N. Y.

Belting Cotton.

Allis, Edward P. & Co., Milwaukee, Wis.
Andres, H., 22 N. 4th st., Philadelphia, Pa.
Atlanta Rubber Co., 16 Decatur st., Atlanta, Ga.
Atkins, E. C. & Co., Indianapolis, Ind.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Buckley, John W., 156 South st., N. Y.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. 31.
Childs, H. L. & Co., 8 Smithfield st., Pittsbg'h, Pa.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Empire Mfg. Co., Lockport, N. Y.
Hooper, William E. & Sons, 2d and Frederick sts., Balt., Md.
Main Belting Co., 9th and Reed sts., Phila., Pa., 248 Randolph st., Chicago, Ill.
Russell Mfg. Co., Middletown, Conn.
Town & Bro., 712 Market st., Phila., Pa.
Underwood Mfg. Co., 82 John st., N. Y., and Tolland, Conn.

Belting—Electric Light.

Herkner & Stine, 8 Ferry st., N. Y.
Ireson, Chas. L., 97 High st., Boston, Mass.
Jewell Belting Co., Hartford, Conn.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. v.
Owen Electric Belt & Appliance Co., 69 E. Randolph st., Chicago, Ill.
Schieren, Chas. A. & Co., 47 Ferry st., N. Y.; Phila. Pa.; Boston, Mass.

Belting—Leather.

Adams, Thos. B. & Co., 31 Federal st., Boston, Mass.
Akron Belting Co., Akron O.
Alexander Bros., 412 N. 3d st., Phila., Pa.
Allis, Edward P. & Co., Milwaukee, Wis.
Alman, B. Pittsfield, Mass.
Ambrose Belting Co., 24 Charlestown st., Boston, Mass.
Am. Oak Leather Co., 404 N. Main st., St. Louis, Mo.
Am. Oak Leather Co., 141 Main st., Cincinnati, Ohio.
Am. Oak Leather Co., 199 Lake st., Chicago, Ill.
Am. Leather Link Belt Co., 46 Ferry st., N. Y.
American Supply Co., 10 Exch. pl., Providence, R. I.
Andres H., 22 N. 4th st., Phila., Pa.
Arny, C. W. & Son, 228 N. 3d st., Phila., Pa.
Atkins, E. C. & Co., Indianapolis, Ind.
Atlanta Rubber Co., 16 Decatur st., Atlanta, Ga.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Baldridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Barbour, J. & E. R., 8 Exchange st., Portland, Me.
Barnum Bros., 187 River st., Troy, N. Y.
Barr, G. D., 206 Main st., Buffalo, N. Y.
Bay State Belting Co., 156 Devonshire st., Boston, Mass.
Beatty, J. W. & Co., Saco, Me.
Beggs, James & Co., 9 Dey st., N. Y.
Belt Hinge Co., 37 Great Jones st., N. Y.
Bickford & Francis, 53 Exchange st., Buffalo, N. Y.
Billington, J. H. & Co., 113 Chestnut st., Phila., Pa.
Boston Belting Co., Boston, Mass.; 100 Chambers st., N. Y.
Bradford, T. Co. (The), 174 W. 2d st., Cincinnati, Ohio.
Brown Bros. & Co., 37 Exchange pl., Providence, R. I.
The Brown Cotton Gin Co., Pequot av., New London, Conn.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Buffalo Belting Works, 14-24 Wells st., Buffalo, N. Y.
Buffalo Rubber Co., 204-206 Main st., Buffalo, N. Y.
Burgess, A. & Son, 692 N. Main st., Providence, R. I.
Butler, R. A., Central Falls, R. I.
Carey, Thos. K. & Co., 21 S. Charles st, Balt., Md.
Carleton, C. G. & Co., 206 Lake st., Chicago, Ill.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. 31.
Chestnut, D. & Co., 147 1st av., Pittsburgh, Pa.
Chase, Benj. H., Manchester, N. H.
Chatfield, Cyrus H., 29 Ferry st., N. Y.
Childs & Co., H. L., 8 Smithfield st., Pittsburgh, Pa.
Chicago Rawhide Mfg. Co., 75 Ohio st., Chicago, Ill.
Clayton, C., Bangor, Me.
Coe & Brown, New Haven, Conn.
Croul Bros., 27 Bates st., Detroit, Mich.
Cross Bros. & Co., Rochester, N. Y.
Cross, E. M., Syracuse, N. Y.
Curtis & Co., 60 W. Monroe st., Chicago, Ill.; 817 N. 2d st., St. Louis, Mo.
Danforth, D., 118 Market st., Phila., Pa.
Davis, James, Belting Co., Pawtucket, R. I.
Degan, L. P., 128 1st st., San Francisco, Cal.
Dickay, H. H. & Son, Lewiston, Me.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Donegan & Swift, 174 Fulton st., N. Y.
Dudgeon, J. W., 92 1st av., Pittsburgh, Pa.
Dunbar, Geo. & Co., 74 Pearl st., Boston, Mass.
Eastman, S. & Co., Concord, N. H.
Eliot, Barnes & Co., Mfrs., 199 Devonshire st., Boston, Mass.
Emerson, Smith & Co., Beaver Falls, Pa.
Etsweiler, W., 418 Dillwyn st., Phila., Pa.
Faber C., 397 Race st., Cincinnati, O.
Fairbrother, H. S. & Co., Fall River, Mass.
Fairbrother, Henry L. & Co., Pawtucket, R. I.
Fayerweather & Ladew, 28-30 Spruce st., N. Y.
Fawcett, T., 39 Strawberry st., Phila., Pa.
Fitzgerald, Michael J., 62 Centre st., N. Y.
Fleischer, J. A., Scranton, Pa.
Forsaith, S. C. & Co., Manchester, N. H.
Foy, J. K. & Co., Gardiner, Me.
Frick & Co., Waynesboro, Pa.
Gabel Belting Co., 46 S. Canal st., Chicago, Ill.
Gage, D. T., 118 Market st., Phila., Pa.
Garnett, J., 140 N. 3d st., Phila., Pa.
Garcin, Moseley & Bohmer, 1206 Main st., Richmond, Va.
Gates, Josiah & Sons, Dutton, c. Market st., Lowell, Mass.
Gilbert Bros. & Co., Mfrs., Derby, Conn.
Girvin & Co., 24 California st., San Francisco, Cal.
Greene, Tweed & Co., 83 Chambers st., N. Y.
Graton & Knight Mfg. Co., Worcester, Mass.
Gutta Percha & Rubber Mfg. Co., 159 Lake st., Chicago, Ill.
Hartley Bros., 400 Smithfield st., Pittsb'g, Pa.
Healy Belting Works, 164 Kent av., Brooklyn, N. Y.

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Heim Leather Belting Co., 328 Pearl st., N. Y.
Heim Belting Co., 29 Ferry st., N. Y.
Herkner & Stine, 8 Ferry st., N. Y.
Hendy, Joshua, Machine Works, 39 Tremont st., San Francisco, Cal.
Hicks, W. R., S. 5th, c. Berry st., Brooklyn, N. Y.
Hines & Williams, 504 Front st., San Francisco, Cal.
Holmes & Blanchard, 37-39 Charlestown st., Boston, Mass.
Hoffman, E. A., 7 Ferry st., N. Y.
Hoffeld, R. & Co., Buffalo, N. Y.
Hoffman, Ernest A., 7 Ferry st., N. Y.
Hunt, H. C. & Co., 45 Arch st., Boston, Mass.
Hudson, H. O. & Co., Worcester, Mass.
Independent Belting Works, 56 Centre st., N. Y.
Ireson, Chas. L., 97 High st., Boston, Mass.
James, C. E. & Co., 103 E. 8th st., Chattanooga, Tenn.
Jacobs, Edward H. & Co., Danielsonville, Conn.
Jewell Belting Co. (Mfgrs.) 15 Trumbull st., Hartford, Conn.
Johnson, W. C., Fitchburg, Mass.
Jordan & Gottfried, 208 Canal st., N. Y.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Kerr, Hugh, 21½ Spruce st., N. Y.
Kerr's Pat. Metallic Belt Lacing Co., 21½ Spruce st., N. Y.
Keene, H. N., Rockland, Me.
Kidder, S., 60 Federal st., Boston, Mass.
Kimball, R., Bangor, Me.
Kittelberger, C. & Son, Akron, O.
Krehl, Hauser & Co., Girard, O.
Lawrence & Herkner, 75 Gold st., N. Y.
Laurence, A. B., 82 John st., N. Y.
Leonard & McCoy, 118 Liberty st., N. Y.
Loeb & Henderson, 189 William st., N. Y.
Logan, Gregg & Co., 306 Wood st., Pittsb'g, Pa.
Lombaert Mfg. Co., Philadelphia, Pa.
Loring & Howard, Brockton, Mass.
Lothrop, G. W., Jr, Woonsocket, R. I.
Lyons, James, 6 Ferry st., N. Y.
McNish, A. M. & Son, 518 Liberty av., Pittsb'g, Pa.
Mason, A., 41 S. 2d st., Philadelphia, Pa.
Miller Bros. & Fletcher, 119 2d st. S., Minneapolis, Minn.
Montgomery & Co., 105 Fulton st., N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Munson & Co., 240 Randolph st., Chicago, Ill.
Newark Leather Belting Co., 32-34 Ferry st., N. Y.
Newark Leather Belting Co., 291 Market st., Newark, N. J.
New York Leather Belting Co., 84-86 Gold st., N. Y.
New York Leather Belting Co., 26 Kent av., Brooklyn, N. Y.
Nichols, B. F., Holyoke, Mass.
Norwich Belt Mfg. Co., 33 N. Canal st., Chicago, Ill.
Norwich Belt Mfg. Co., 35 Water st., Norwich, Conn.
O'Neal & Price Co. (The), 124 West 2d st., Cincinnati, O.
Page Belting Co., Concord, N. H.
Page, E. F. & Co., Lawrence, Mass.
Page, J. M. & Co., Naugatuck, Conn.
Paige Bros., Akron, O.
Parke & Lacy, 8 California st., San Francisco, Cal.
Parr, W., Lowell, Mass.
Palmer, N. & Co. (Mfgrs.). 302 Asylum st., Hartford, Conn.
Perkins Machinery Co., Atlanta, Ga.
Peirce, F., 128 Federal st., Boston, Mass.
Pechin, J. W. & Bro., 153 N. 3d st., Phila., Pa.
Perkins, Joel S. & Co. (Lmtd.), 190 Market st., Philadelphia, Pa.
Peck, W. H. & Co., 176 Superior st., Cleveland, O.
Phillips, J. & H., 26 6th st., Pittsburgh, Pa.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Phoenix Packing & Rubber Co., 108 Liberty st., N. Y.
Pittsburgh Pipe Covering & Belting Co., 138 1st av., Pittsburgh, Pa.
Place, C. L., Lawrence, Mass.
Popham, H. & Son, 1st st., East Newark, N. J.
Potts & Locher, Lancaster, Pa.
Popham, Henry & Son, Harrison, N. J.
Pond Engineering Co., St. Louis and Kansas City, Mo.
Preston & Mott, Minneapolis, Minn.
Providence Belting Co., 37-39 Charles st., Providence, R. I.
Race, Henry W. & Co., Portland, Me.
Raniville, F. & Co., Grand Rapids, Mich.
Renter & Mallory, 22 Light st., Balt., Md.
Reeves, Thos. H., Minneapolis, Minn.
Ritchie, Crawford & Co., 230 Arch st., Phila., Pa.
Roberts, Samuel, 369 Pearl st., N. Y.
Sayre Belting Co., Utica, N. Y.
Schieren, Chas. A. & Co., 47 Ferry st., N. Y.; 86 Federal st., Boston; 416 Arch st., Phila., Pa.
Schanweker, F., Meadville, Pa.
Shultz Belting Co., St. Louis Mo.; 128 Pearl st., Boston, Mass.
Shultz Belting Co., 140 N. 3d st., Phila., Pa.
Sharp, Joseph, 59 Walnut st., Cincinnati, O.
Slate, Geo. Sons, Williamsport, Pa.
Star Tanning Co., Pawtucket, R. I.
Stedman & Fuller Mfg. Co., 58 Warren st., Providence, R. I.
Steel, W., 120 Market st., Phila., Pa.
Taylor, A., Bangor, Me.
Temsfeld, Chas. F., 589 Hudson st., N. Y.
Thomson Belting Co., 117 E. Pearl st., Cincinnati, Ohio.
Tomsfeld, C. F., 157 Elm st., N. Y.
Town & Bro., 712 Market st., Phila., Pa.
Troy Belting & Supply Co., 550 Fulton st., Troy, N. Y.
Turner, Chas. A., 14 Market st., Pittsburgh, Pa.
Underwood Mfg Co. (The), Tolland, Conn.
Underwood Mfg. Co., 82 John st., N. Y.
Union Belt Co., Fall River, Mass.
Van Riper Mfg. Co., 12 Van Houten st., Paterson, N. J.
Walker, C. W., 288 Market st., Newark, N. J.
Warren, J. F. & C. G., 195 Front st., Worcester, Mass.
Weathered, Thompson & Co., Pawtucket, R. I.
Werner, L., 247 Market st., Newark, N. J.
Whiting & Weston, Lowell, Mass.
Whitney & Starr, 232 West st., N. Y.
Wilhelm & Bradford, Akron, O.
Wilby, Wm., Lowell, Mass.
Williams, I. B. & Son, Dover, N. H.
Wise & Bayley, 143 Market st., Phila., Pa.

Leather Link Belt.

American Leather Link Belt Co., 45 Ferry st., N. Y.
Burr & Dodge, 123 N. 5th st., Phila., Pa.
Gerland, M., 711 Water st., Bay City, Mich.
Ireson, Chas. L., 97 High st., Boston, Mass.
Link Belt Machinery Co., 49 Dey st., N. Y.; 125 N. 5th st., Phila., Pa.
Schieren & Co., Chas. A., 45 Cliff st., N. Y., Phila. and Boston.

Belting—Paper.

Crane Bros., Westfield, Mass.

Belting—Round.

Sewing Machine Supplies Co. (The), 105 Summer st., Boston, Mass.
Underwood Mfg. Co. (The), Tolland, Conn.

Belting—Rubber.

Akron Rubber Works, Akron, O.
Allis, Edward P. & Co., Milwaukee, Wis.
Atlanta Rubber Co., 16 Decatur st., Atlanta, Ga.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Ballard, S. & Co., 123 Chambers st., N. Y.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Boston Belting Co., 260 Devonshire st., Boston, Mass.

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Boston Rubber Co., 260 Devonshire st., Boston, Mass.
Buckley, John W., 156 South st., N. Y.
Brook, Jas. F. Co. (The), Trenton, N. J.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Carey, Thos. K. & Co., 21 S. Charles st., Balt., Md.
Carpenter, Geo. B., & Co., 202 S. Water st., Chicago, Ill. 31.
Chesterton, A. W. & Co., 49 India st., Boston, Mass.
Childs, H. L. & Co., 8 Smithfield st., Pittsbg'h, Pa.
Chicago Rubber Works, 179 Randolph st., Chicago, Ill.
Cleveland Rubber Co., C. &. P. & Nickel Plate Railroad, Cleveland, O.
Coes, L., Worcester, Mass.
Combination Roll & Rubber Co., 38 Park Row, N. Y.
Conant Rubber Co., 26 and 28 Asylum st., Hartford, Conn.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Donnelly, M. & Co., 134 Leroy st., N. Y.
Dubuque Rubber & Belting Co., Dubuque, Iowa.
Emerson, Smith & Co., Beaver Falls, Pa.
Empire Rubber Co.. Trenton, N. J.
Erie Rubber Co., Erie, Pa.
Forsaith, S. C. & Co., Manchester, N. H.
Fraser & Chalmers, Union st., Chicago, Ill.
Gutta Percha & Rubber Mfg. Co., 125 W. Lodge av., Toronto, Ont.
Gutta Percha & Rubber Mfg. Co., 15 1st. st., San Francisco, Cal.
Gutta Percha & Rubber Mfg. Co., 35 Warren, c. Church st., N. Y.
Gutta Percha & Rubber Mfg. Co., 159 Lake st., Chicago, Ill.
Goodyear's India Rubber Glove Mfg. Co., 503 & 505 Broadway, N. Y.
Girvin & Co., 24 California st., San Francisco, Cal.
Globe Rubber Co., Trenton, N. J.
Gabel Belting Co., 46 S. Canal st., Chicago, Ill.
Hamilton Rubber Co., 131 Lake st., Chicago, Ill.
Hamilton Rubber Co., Trenton, N. J.
Home Rubber Co., Trenton, N. J.
Mercer Rubber Co., Trenton, N. J.
Miller Bros. & Fletcher, 119 2d st. N., Minneapolis, Minn.
Morris Machine Works, Baldwinsville, N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. v.
New Jersey Car Spring & Rubber Co., Wayne, c. Brunswick st., Jersey City, N. J.
Ohio Belting & Supply Co., Cleveland, O.
O'Neal & Price Co. (The), 124 W. 2d st., Cincinnati, O.
Parke & Lacy, 8 California st., San Francisco, Cal.
Phillips, J. & H., 26 6th st., Pittsburgh, Pa.
Pittsburgh Pipe Covering & Belting Co., Ltd., 138 1st av., Pittsburgh, Pa.
Phoenix Packing & Rubber Co., 108 Liberty st., N. Y.
Revere Rubber Co., 63 Franklin st., Boston, Mass.
Sharp, Joseph, 59 Walnut st., Cincinnati, O.
Star Rubber Co., Trenton, N. J.
Town & Bro., 712 Market st., Phila., Pa.
Trenton Rubber Co., Trenton, N. J.

Belting and Packing.

Adams, T. B. & Co., 31 Federal st., Boston, Mass.
Adams, A., 45 Dey st., N. Y.
Allen, W. D. & Co., 151 E. Lake st., Chicago, Ill.
Alexander Bros., 410 N. 3d st., Phila., Pa.
American Fire Hose Mfg. Co., 152 E. Lake st., Chicago, Ill.
Ambrose Belting Co., 24 Charlestown st., Boston, Mass.
American Oak Leather Co., 199 E. Lake st., Chicago, Ill.
American Oak Leather Co., 2d, c. Walnut st., Cincinnati, O.
American Supply Co., 10 Exchange pl., Providence, R. I.
American Supply Co., Valley Falls, R. I.
Andres, H., 22 N. 4th st., Phila., Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Baker, Sloo & Co., 6 Magazine st., New Orleans, La.
Barnum Bros., Troy, N. Y.
Barr, G. D., Buffalo, N. Y.
Bay State Belting Co., 156 Devonshire st., Boston, Mass.
Beatty, Jas. W. & Co., Saco, Me.
Blandy, J. L. F., Zanesville, O.
Barnum Bros., 187 River st., Troy, N. Y.
Ballard, S. & Co., 123 Chambers st., N. Y.
Boston Belting Co., 256-260 Devonshire st., Boston, Mass., and 100 Chambers st., N. Y.
Boston Woven Hose Co., 220-222 Lake st., Chicago, Ill.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Bowen & Martin, 112 S. 2d st., Phila., Pa.
Buffalo Belting Works, 14-24 Wells st., Buffalo, N. Y.
Buffalo Rubber Co., Buffalo, N. Y.
Bullock, C. K., 1361 Ridge av., Phila., Pa.
Burr & Dodge, 123 N. 5th st., Phila., Pa.
Burgess, A. & Son, 692 N. Main st., Providence, R. I.
Burr & Dodge, 35 S. Holliday st., Balt., Md.
Burger, J. N. & Son, Elizabeth, N. J.
Bradford, T. & Co., 174 W. 2d st., Cincinnati, O.
Bickford & Francis, 53-55 Exchange st., Buffalo, N. Y.
Birtwell, H. B., Chester, Pa.
Brown Bros. & Co.. 37 Exchange pl., Providence, R. I.
Butler, R. A., Central Falls, R. I.
Carroll, I. O. & Son., Norwich, Conn.
Carleton, C. G. & Co., 206 E. Lake st., Chicago, Ill.
Carolen, Corey & Co., 117 California st., San Francisco, Cal.
Carey, T. K. & Co., 21 S. Charles st., Balt., Md.
Chicago Rawhide Mfg. Co., 75-77 Ohio st., Chicago, Ill.
Chicago Rubber Works, 230 E. Randolph st., Chicago, Ill.
Childs, H. L. & Co., 8 Smithfield st., Pittsburgh, Pa.
Chestnut, D. & Co., 147 1st av., Pittsburgh, Pa.
Chase, B. H., Manchester, N. H.
Chesapeake Belting Co. (The), 330-334 North st., Balt., Md.
Clapp, C. M. & Co., 183 Devonshire st., Boston, Mass.
Claflin, C. J. & Co., Covelands, Providence, R. I.
Clayton, C. & W. Z., Bangor, Me.
Clark, Fayette C., Hartford, Conn.
Clements, J. & Son, Bay City, Mich.
Cleveland Rubber Co., Cleveland, O.
Cook, H. N., 405 Market st., San Francisco, Cal.
Cook, A. O. & Son, 415 Market st., San Francisco, Cal.
Coiled Wire Belting Co. (The), 93 Cliff st., N. Y.
Coe & Brown, 204 George st., New Haven, Conn.
Crisp & Hague, Bloomfield, N. J.
Croul Bros., Detroit, Mich.
Cross Bros. & Co., 167 Front st., Rochester, N.Y.
Culver, Fitz E. & Co., 54 La Salle st., Chicago, Ill.
Curtis, D. W., 97 W. Fayette st., Syracuse, N. Y.
Curtis & Co. Mfg. Co., 60 W. Monroe st., Chicago, Ill.
Davis, Jas., Belting Co., Pawtucket, R. I.
Dawson, Garver & Miller, Des Moines, Iowa.
Degen, L. P., 128-130 1st st., San Francisco, Cal.
Detrick, E. & Co., 108 Market, st., San Francisco, Cal.
Dickey, H. H. & Son, Lewiston, Me.
Diehl, W. W., Springfield, O.
Dickerman & Jopp, West Winsted, Conn.
Donaldson, J. P. & Co., Detroit, Mich.

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Dudgeon, J. W., 22 1st av., Pittsburgh, Pa.
Eastman, S. & Co., Concord, N. H.
Edwards, C. A., 85 John st., N. Y.
Elert, C. H., Evansville, Ind.
English, J. W. & Bro., Kansas City, Mo.
Evansville Leather & Belting Co., Evansville, Ind.
Everson & Co., 10 S. Salina st., Syracuse, N. Y.
Ewart Mfg. Co., 11 S. Jefferson st., Chicago, Ill.
Faber, C., 397 Race st., Cincinnati, O.
Fairbrother, H. L. & Co., Pawtucket, R. I.
Fairbrother, N., 19 Weybosset, st., Providence, R. I.
Faitoute, E. C., 434 Broad st., Newark, N. J.
Fayerweatner & Ladew, 151 Lake st., Chicago, Ill.
Fetherling, C. C. & Co., Middletown, O.
Fitzgerald, M. J., 62 Centre st., N. Y.
Fitzgerald, Rufus, Nashua, N. H.
Fogarty & Neil, 505 W. Main st., Louisville, Ky.
Gable Belting Co., 46 S. Canal st., Chicago, Ill.
Gandy Belting Co., 102-104 Hollingsworth st., Balt., Md.
Gandy Belting Co., 75 Gold st., N. Y.
Gardner Co. (The A. H.) Milwaukee, Wis.
Garnett, J., 140 N. 3d. st., Phila., Pa.
Gates, Josiah & Son, Dutton, c. Market sts., Lowell, Mass.
Goldbach, J. C., 232 5th st., Louisville, Ky.
Goldbach, B. H. Hide & Leather Co., 233 6th st., Louisville, Ky.
Goodyear Rubber Co., 147 5th av., Chicago, Ill.
Goodyear Rubber Co., 487 Broome st, N. Y.
Goodyear Rubber Co., 577 Market st., San Francisco, Cal.
Goodyear Rubber Co., 242 Main st., Buffalo, N.Y.
Goulds & Austin, 167 E. Lake st., Chicago, Ill.
Graton & Knight Mfg. Co., Worcester, Mass.
Gray, John W. & Co., 149 Asylum st., Hartford, Conn.
Gray, R. Jr., 190 Market st., Newark, N. J.
Gregory, H. P. & Co., 2 California st., San Francisco, Cal.
Griffith & Wedge, Zanesville, O.
Gutta Percha & Rubber Mfg. Co., 159 Lake st., Chicago, Ill.
Gutta Percha & Rubber Mfg. Co., 15 1st st., San Francisco, Cal.
Gutta Percha & Rubber Mfg. Co., 35 Warren st., N. Y.
Gutta Percha & Rubber Mfg. Co., 159-161 E. Lake st., Chicago, Ill.
Gump, C. A., Dayton, O.
Hagar, G. I., Burlington, Vt.
Haines, E. W., 14-24 Wells st., Buffalo, N. Y.
Hamilton & Mathews, 26 Exchange st., Rochester, N. Y.
Hamilton Rubber Co., 133 E. Lake st., Chicago, Ill.
Hamilton Rubber Co., Trenton, N. J.
Hartley Bros., 400 Smithfield st., Pittsb'g, Pa.
Harvie, J., Harrisburgh, Pa.
Heim Belting Co., 29 Ferry st., N. Y.
Heim Leather Belting Co., 217 E. Fayette st., Balt. Md.
Hill, P., 15 N. 9th st., Phila., Pa.
Hide, Leather & Belting Co., Indianapolis, Ind.
Hoffeld, R. & Co., 14-24 Wells st., Buffalo, N. Y.
Holt, S. L. & Co., 67 Sudbury st., Boston, Mass.
Holbrook, A. & C. W., 748 N. Main st., Providence, R. I.
Howlett, F. C., 4 W. Fayette st., Syracuse, N. Y.
Hudson, H. O. & Co., 143 Front st., Worcester, Mass.
Hunt, H. C. & Co., 45 Arch st., Boston, Mass.
Ireson, C. L. & Co., 97 High st., Boston, Mass.
Jacobs, E. H. & Co., Danielsonville, Conn.
Janney & Cogdon, 12 N. Charles st., Balt., Md.
Jeffrey Mfg. Co. (The), Columbus, O.
Jewell Belting Co., 15 Trumbull st., Hartford, Conn.
Johns, Stacy & Co., Des Moines, Iowa.
Kendall & Lyon, 65 Walnut st., Cincinnati, O.
Kidder, S., 60 Federal st., Boston, Mass.
Kirkwood, A. J. & Co., 12 and 14 S. Canal st., Chicago, Ill.
Knapp & Merkel, Union City, Ind.
Klock, Daniel. Jr., 10 B'way, Troy, N. Y.
Lanning, G. W., Trenton, N. J.
Link Belt Machinery Co., 11-23 S. Jefferson st., Chicago, Ill.
Logan, Gregg & Co., 306 Wood st., Pittsbg'h, Pa.
Lothrop, G. W., Jr., Woonsocket, R. I.
McGown, John H. Co. (The), 134 W. 2d st., Cincinnati, O.
Macknet & Doremus, 796 Broad st., Newark, N. J.
McLanathan, F. W., Lawrence, Mass.
McNish, A. M. & Son, 516 Liberty av., Pittsbg'h, Pa.
Main Belting Co., 248 E. Randolph st., Chicago, Ill.
Main Belting Co., 9th, c. Reed st., Phila., Pa.
Martin, T., Detroit, Mich.
Mantle & Cowan, 435 W. Main st., Louisville, Ky.
Mayle, G. D., Louisville, Ky.
Menah, R. & Bros., Louisville, Ky.
Mey, F. H., 63 Columbia st., Buffalo, N. Y.
Miller, W. H., Bay City, Mich.
Munson & Co., 240 E. Randolph st., Chicago, Ill.
Neville & Co., 31 California st., San Francisco, Cal.
Newark Leather Belting Co., 291 Market st., Newark, N. J.
Newark Leather Belting Co., 32 Ferry st., N. Y.
N. Y. Belting and Packing Co., 15 Park row, N. Y. ▼.
New York Belting and Packing Co., 169 E. Lake st., Chicago, Ill. ▼.
N. Y. Rubber Co., 84-86 Reade st., N. Y.
New Orleans Railway Supply and Mfg. Co., 119 Common st., New Orleans, La.
Nordyke & Marmon Co., Indianapolis, Ind.
Norwich Belt Mfg. Co., 35 Water st., New Haven, Conn.
Norwich Belt Mfg. Co., Norwich, Conn.
Noxen & Whitney, Middletown, Conn.
Ohio Belting and Supply Co., 8 S. Water st., Cleveland, O.
O'Neal & Price Co. (The), 124 W. 2d st., Cincinnati, O.
Page Belting Co., Concord, N. H.
Page Belting Co., 161 E. Lake st., Chicago, Ill.
Parker, Thos., Detroit, Mich.
Palmer, N. & Co., 302 Asylum st., Hartford, Conn.
Pearce, Atkins & Co., 114 W. 2d st., Cincinnati, O.
Peirce, Frank, 128 Pearl st., Boston, Mass.
Perry, W. R., New London, Conn.
Phillips, J. & H., 26 6th st., Pittsburgh, Pa.
Popham, H. & Son, 1st st., East Newark, N. J.
Powell & Maddock, 20 N. 6th st., Phila., Pa.
Pratt, Sumner & Co., 22 Front st., Worcester, Mass.
Preston, E. B. & Co., 151 E. Lake st., Chic., Ill.
Pyne, W. T., 1107-1117 W. Main st., Louisville, Ky.
Revere Rubber Co., 63 Franklin st., Boston, Mass.
Revere Rubber Co., 64 Reade st., N. Y.
Rhoads & McComb, 1923 Carson st., Pittsb'g, Pa.
Roberts, G. W. & Co., 144 Lake st., Chicago, Ill.
Rowell, S. C. & Co., 135 Pearl st., Boston, Mass.
Royer, H., 855 Bryant st., San Francisco, Cal.
Rudolf, W. B. & Co., 216½ E. 18th st., Chicago, Ill.
Rumsey, L. M., Mfg. Co., 810 N. 2d st., St. Louis, Mo.
Russell Mfg. Co., Middletown, Conn.
Ryling, J. & Son., 22 E. 8th it., Cincinnati, O.
Sage, H. A. & Co., Elton, Pa.
Salisbury, A. Cline, 109 Madison st., Chicago, Ill.
Sayre Mfg. Co., Utica, N. Y.
Sawyer, H. S., Colebrook River, Conn.
Selby, T. H. & Co., 116 California st., San Francisco, Cal.
Schieren, C. A. & Co., 86 Federal st., Boston, Mass.
Schwaner, H. & Co., 309 Destrehan st., St. Louis,
Schwenker, W. M., 105 John st., N. Y.
Sharp, J., 59 Walnut st., Cincinnati, O.
Shultz Belting Co., Barton, c. Bismarck st., St. Louis, Mo.

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Shultz Belting Co., 140 N. 3d., st., Phila., Pa.
Shultz Belting Co., 128 Pearl st., Boston, Mass.
Smith, H. B., Machine Co., 225 Market st., Phila., Pa.
Swormstedt, R., 11 S. Frederick st., Balt., Md.
Star Tanning Co., Pawtucket, R. I.
Studley, E. G. & Co., Grand Rapids, Mich.
Syracuse Belting Co., 97 W. Fayette st., Syracuse, N. Y.
Tatum & Bowen, 25 Main st., San Francisco, Cal.
Teirce & Middleton, 24 N. Front st., Phila., Pa.
Temsfield, C. F., Jersey City, N. J.
Thompson Belting Co., 115 E. Pearl st., Cincinnati, O.
Todd, McNeil & Co., 917 N. 2d st., St. Louis, Mo.
Troy Belting & Supply Co., 550-554 Fulton st., Troy, N. Y.
Truman, Isham & Co., 421 Market st., San Francisco, Cal.
Utica Rubber Co., Utica, N. Y.
Underwood Mfg. Co., Tolland, Conn.
Van Houten & Co., Paterson, N. J.
Walker, C. W., 288 Market st., Newark, N. J.
Warren, J. F. & C. G., 195 Front st., Worcester, Mass.
Weatherhead, Thompson & Co., Pawtucket, R.I.
Whelpley, R. T., 141 Lake st., Chicago, Ill.
Wilder, W., St. Johnsbury, Vt.
Wilby, Thos. & Co., Chester, Pa.
Williams, I. B. & Son, Dover, N. H.
Williamson Belting Co., 50 Oliver st., Boston, M.
Wise & Bailey, 141 Market st., Philadelphia, Pa.
Wylie, J. A. & Co., 134 Eliot st., Boston, Mass.

Bevels.

Stanley Rule & Level Co., 29 Chambers st., N.Y.
Starrett, L. S., Athol, Mass.

Bits—Auger, Machine and Extension.

American Ship Windlass Co., Providence, R. I. xii.
Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Bates, Wilson & Co., 80 Chambers st., N. Y.
Bridgeport Gun Implement Co. (The), Bridgeport, Conn.
Brown, R. H. & Co., New Haven, Conn.
Beecher, F. H., Seymour, Conn.
Chester Mfg. Co., Chester, Conn.
Cincinnati Tool Co. (The), 216 W. 2d st., Cincinnati, O.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. 24.
Conn. Valley Mfg. Co., Centre Brook, Conn.
Currier Bros., Chesterfield Factory, N H.
De Witt, Morrison & Kelly, 11 N. 22d st., Phila., Pa.
Egan Co. (The), Cincinnati, O.
Elmwood Tool Co., c. Harrison and Sprague sts., Providence, R. I.
Gerlach, Peter & Co., Columbus and Winter sts., Cleveland, O.
Heinze, Chas. E., Newark, N. J.
Hernandez, Frank X., San Jose, Cal.
Hill, Bush & Co., Reading, Mass.
Humphreyville Mfg. Co., Seymour, Conn.
Knapp & Cowles Mfg. Co. (The) Bridgeport, Ct.
Lawrence Mfg. Co., Newark, N. J.
Lowe, Harry, Montpelier, Vt.
Mayhew, H. H. & Co., Shelbourne Falls, Mass.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Peck, Stow & Wilcox Co., Southington, Conn.
Pellier & Merigot, San Jose, Cal.
Pierce, Fred. B., Chesterfield Factory, N. H.
Rockford Twist Drill & Bit Co., Rockford, Ill.
Russell, Jennings Mfg. Co. (The), Deep River, Conn.
Snell Mfg. Co (The), Fiskdale, Mass.
Standard Tool Co., Cleveland, O. 49.
Syracuse Twist Drill Co., Syracuse, N. Y.
Van Ness, Thos. E., Caldwell, N. J.
Wells Bros. & Co., Greenfield, Mass.
Whitman Saddle Co., 118 Chambers st., N. Y.

Blackboards—Depot.

Richmond Map & Blackboard Mfg. Co., Richmond, Ind.

Blanketing for Machinery.

Kenyon Bros., Woodstock Valley, Conn.

Blast Furnace.

Albany City Iron Works, Albany, N. Y.
Alice Furnaces, Tennessee Coal, Iron & R. R. Co., Nashville, Tenn.
Allentown Rolling Mills, Allentown, Pa.
Allentown Iron Co., 223 S. 3d st., Phila., Pa.
Ætna Furnace, Ætna Iron Co., Nashville, Tenn.
Andover Iron Co., Phillipsburgh, N. J.
Amherst Furnace, Snowden, Va.
Anna Furnaces, Struthers Furnace Co., Struthers, O.
Antietam Iron Works, P. A. Ahl & Bro., Newville, Pa.
Antrim Iron Co., Grand Rapids, Mich.
Anvil Furnace, Pottstown Iron Co., Pottstown, Pa.
Appleton Furnace Co., Appleton, Wis.
Ashland Furnaces, Ashland Coal, Iron & Ry. Co., Ashland, Ky.
Aurora Furnace, Schall, Stacy & Denny, Writesville, Pa.
Baird Furnace, Baird Furnace Co., Gore, O.
Bangor Furnace, Spring Lake Iron Co., Fruitport, Mich.
Bay View Furnaces, North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; and 151 Insurance Block, Milwaukee, Wis.
Bear Spring Furnace, Cumberland Iron Works Co., Nashville, Tenn.
Belfont Furnace, Belfont Iron Works Co., Ironton, O.
Bellefonte Furnace, Means & Russell Iron Co., Ashland, Ky.
Bellefonte Furnace Co., 139 S. 4th st., Phila., Pa.
Berlin Iron Works, Jackson Iron Co., Berwick, Pa.
Belmont Furnace, Belmont Nail Co., Wheeling, W. Va.
Bellaire Nail Works, Bellaire, O.
Benwood Iron Works, Wheeling, W. Va.
Bertha Furnaces, S. Frank Eagle, Cecil, O.
Bethlehem Iron Co., Bethlehem, Pa.
Bettie Furnace, Black Band Iron & Coal Co., Spring Hill, W. Va.
Bibb Furnace, Brierfield Iron & Coal Co., Brierfield, Ala.
Big Muddy Furnace, Lewis Iron Co., 322 Pine st., St. Louis, Mo.
Bird Coleman Furnace, W. C. Freeman, Cornwall, Pa.
Birmingham Furnace & Mfg. Co., Trussville, Ala.
Blair Iron & Coal Co., Hollidaysburg, Pa.
Bloomery Furnace, Bloomery Furnace Co., Bloomery, P. O., W. Va.
Bloom Furnace, Clare Iron Co., Bloom Switch, O.
Bloom Furnace (Wm. Neal & Sons), Bloomsburg, Pa.
Bloomsburg Iron Co., Bloomsburg, Pa.
Boonton Furnace (Eckert & Bro.), Reading, Pa.
Brazil Furnace, Central Iron & Steel Co., Brazil, Ind.
Brier Hill Iron & Coal Co., Youngstown, O.
Brown, Bonnell & Co., Youngstown, O.
Buckeye Furnace Co., Riverton, O.
Burden Iron Co., Troy, N. Y.
Butler Furnace, R. R. Butler, Mountain City., Tenn.
Cameron Iron & Coal Co., 5½ Pine st., N. Y.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Cameron Furnace, Cameron Furnace Co., Middletown, Pa.
Canaan Furnace, Barnum, Richardson & Co., Lime Rock, Conn.
Capon Iron Works, J. J. & S. E. Keller, Capon Iron Works P. O., W. Va.
Callie Furnace, Hileman, Waring & Co., Clifton Forge, Md.

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California Iron & Steel Co., 329 Market st., San Francisco, Cal.
Calumet Furnace, Chicago Furnace Co., Chicago, Ill.
Carbon Iron Works, Carbon Iron & Pipe Co. (Ltd) Mauch Chunk, Pa.
Carrie Furnace, Carrie Furnace Co., Pittsburgh, Pa.
Carrick Furnace, H. M. North & Co. Metal, Pa.
Carlisle Iron Works, J. C. Bucher, Boiling Springs, Pa.
Catoctin Iron C., Catoctin Furnace P. O., Md.
Cave Hill Furnace, Wytheville, Va.
Cedar Run Furnace, Graham & Robinson, Graham's Forge, Va.
Cedar Point Anthracite Furnace, Baltimore Iron Co., Balt., Md.
Cedar Point Charcoal Furnace, Baltimore Iron Co., Balt., Md.
Cedar Point Furnace, Witherbees, Sherman & Co., Port Henry, N. Y.
Central Iron Works, Hilena, Ala.
Centre Iron Co., 139 S. 4th st., Phila., Pa.
Centre Furnace, Centre Mining & Mfg. Co., Ironton, O.
Chapinville Furnace, Chapinville, Conn.
Charlotte Furnace Co. (Ltd.), Scottdale, Pa.
Charlotte Iron Works, 306 Power's Block, Rochester, N. Y.
Chattanooga Iron Co., Chattanooga, Tenn.
Chateaugay Ore & Iron Co., Plattsburg, N. Y.
Chatham Furnace Co., Chatham, N. Y.
Chester Furnace (W. J. Taylor & Co.), Chester, N. J.
Chester Furnace, Chester Rolling Mills, Thurlow, Pa.
Chulasky Furnace, Chulasky, Pa.
Chestnut, Hill Iron Ore Co., Columbia, Pa.
Chickies Iron Co., Chickies, Pa.
Chestnut Grove Furnace, John C. Long, Mechanicsburg, Pa.
Chesapeake Furnace, Baltimore Chrome Works Co., Canton, Md.
Cherokee Iron Works, Cedartown, Ga.
Cherry Valley Furnaces, Cherry Valley Iron Works, Leetonia, O.
Citicio Furnace Co., Chattanooga, Tenn.
Claire Furnace Co. (Ltd.), Sharpsville, Pa.
Cleversburg Furnace, Clever & Sons, Cleversburg, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Clifton Furnace, Clifton Iron Co., Jenifer, Ala.
Clinton Furnace, Graff, Bennett & Co., Pittsb'g, Pa.
Clove Spring Iron Works, Clove Valley, N. Y.
Colebrook Furnace, Rob't H. Coleman, Cornwall, Pa.
Columbus & Hocking Coal & Iron Co., Columbus, O.
Columbia Furnaces (Grove Bros.), Danville, Pa.
Coleraine Iron Works (Wm. T. Carter & Co.), 302 Walnut st., Phila., Pa.
Cold Spring Furnace, West Point Furnace Co., Cold Spring, N. Y.
Colorado Coal & Iron Co., South Pueblo, Col., and 41 Wall st., N. Y.
Columbia-Liberty Iron Co., Columbia Furnace P. O., Va.
Conestoga Furnace, Peacock & Thomas, Lancaster, Pa.
Conewago Furnace, Conewago Iron Co., Middletown, Pa.
Coplay Iron Co. (Ltd), Coplay, Pa.
Copake Iron Works, Frederick Miles, Copake Iron Works P. O., N. Y.
Cornwall Charcoal Furnace, Cornwall Iron Co. (Ltd), Cornwall, Pa.
Cordelia Furnace, Cordelia Iron Co., Cordelia, Pa.
Cornwall Anthracite Furnace. Robt. H. Coleman, Cornwall, Pa.
Cornwall Bridge Iron Co., Cornwall Bridge, Conn.
Cornelia Furnace Co., Jackson, O.
Cranberry Furnace, Cranberry Iron & Coal Co., 237 S. 3d st, Phila., Pa.
Crane Iron Works, Crane Iron Co., 224 S. 4th st., Phila., Pa.
Crown Point Iron Co., Crown Point, N. Y.
Crozer Furnace, Crozer Steel & Iron Co., Roanoke, Va.
Cumberland Furnace, Drouillard Iron Co., Nashville, Tenn.
Dayton Coal & Iron Co. (Ltd), Johnson Bldg, Cincinnati, O.
De Bardeleben Coal & Iron Co., Birmingham, Ala.
Decatur Land Improvement & Furnace Co., Decatur, Ala.
Deer Lake Furnaces, Deer Lake Co., Ishpenring, Mich.
Detroit Iron Furnace Co., Detroit, Mich.
Donaghmore Furnace, W. C. Freeman, Cornwall, Pa.
Douglas Furnace, Pierce, Kelly & Co., Sharpsville, Pa.
Dover Furnace, Penn Iron & Coal Co., Canal Dover, O.
Duluth Furnace, Duluth Iron Co., Duluth, Minn.
Dutchess Furnace, Clove Spring Iron Works, Clove Valley P. O., N. Y.
Durham Iron Works (Cooper & Hewitt) Riegelsville, Pa.
Duncannon Iron Co., Duncannon, Pa.
Dunbar Furnaces, Dunbar Furnace Co., Dunbar, Pa.
Eagle Furnaces, Curtins & Co., Roland, Pa.
Eamus Furnace, Donaldson Iron Co., 226 Walnut st., Phila., Pa.
Edgar Thomson Furnaces, Carnegie Bros. (Ltd.), Bessemer Station, Pa.
Edge Hill Furnace (Chas. Richardson & Sons, Edge Hill, Pa.
Edith Furnace, Edith Furnace Co., Allegheny City, Pa.
Edwards Iron Co., Woodstock, Ala.
Ella & Fannie Furnaces, Wheeler Furnace Co., Sharon, Pa.
Eliza Furnaces, Laughlin & Co. (Ltd.), Pittsb'g, Pa.
Elizabeth Furnace, H. A. Long, Water Lick, Va.
Eliza Furnace, Eliza Iron Co., Wallston, O.
Elk Rapids Furnace, Elks Rapids Iron Co., Elks Rapids, Mich.
Elk River Furnace, Strange Creek, W. Va.
Elmira Iron & Steel Rolling Mill Co., Elmira, N. Y.
Emma Furnace, Logan Iron & Steel Co., 218 S. 4th st., Phila., Pa.
Emma Furnace, Union Rolling Mill Co., Cleveland, O.
Ensley Furnaces, Tennessee Coal, Iron & R. R. Co., Nashville, Tenn.
Estill Furnace, C. W. Russell, Furnace P. O., Estill Co., Ky.
Etna Furnaces, Etna Iron Works (Ltd.), New Castle, Pa.
Etna Furnace Co., Etna Furnace P. O., Ga.
Etna Iron Works, Cincinnati, O.
Eureka Co., Oxmoor, Ala.
Eureka Furnaces, Eureka Iron & Steel Works, Detroit, Mich.
Everett Furnace, Everett, Pa.
Fairchance Furnace, Fairchance Furnace Co., Fairchance, Pa.
Fallkill Iron Co., Poughkeepsie, N. Y.
Falling Spring Furnace, C. Burkhart & Co., Chambersburg, Pa.
Fannie Furnaces, J. C. Hamilton, Shawnee, O.
Fayette Furnaces, Jackson Iron Co., Cleveland, O.
Florence Furnace, Henderson Iron Co., Sharpsville, Pa.
Florence Furnace, H. C. Dolph, 92 Dearborn st., Chicago, Ill.
Fond du Lac Furnace, Wisconsin Furnace Co., 68 Dearborn st., Chicago, Ill.
Foster's Falls Furnace, Foster's Falls Mining & Mfg. Co., Foster's Falls, Va.
Fox River Furnaces, West Depere, Wis.
Franklin Iron Mfg. Co., Franklin Iron Works, P. O., N. Y.
Franklin Furnace, King, Gilbert & Warner, Columbus, O.
Franklin Iron Co., Franklin Furnace P. O., N. J.

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Frankstown Furnace, James Pierport, Frankstown, Pa.
Frankfort Furnace Co., 32 Woodward av., Detroit, Mich.
Fulton Furnace, Globe Iron Co., Jackson, O.
Gadsden-Alabama Iron Co., Gadsden, Ala.
Gadsden Furnace, Gadsden Iron Co., Gadsden, Ala.
Gaylord Iron Co., Detroit, Mich.
Gap Furnace, Hollidaysburg & Gap Iron Co., Hollidaysburg, Pa.
Gere Iron & Mining Co., Port Leyden, N. Y.
Gem Furnace, Shenandoah Iron Co., Milnes, Va.
Girard Furnace, Girard Iron Co., Girard, O.
Glasgow Furnace, King, Gilbert & Warner, Columbus, O.
Glamorgan Furnaces, Glamorgan Iron Co., 332 Walnut st., Phila., Pa.
Glendon Iron Co., Easton, Pa.
Gogebic Furnace, Gogebic Furnace Co., Iron River, Mich.
Grace Furnace, Traverse Iron Co., 88 Washington st., Chicago, Ill.
Graffton Furnaces, Graffton Iron Co., Leetonia, Ohio.
Green Bay Furnace, National Furnace Co., Depere, Wis.
Greenwood Furnace, Logan Iron & Steel Co., Lewistown, Pa.
Hamden Furnace Co., Portsmouth, O.
Hamilton Furnace, Means, Kyle & Co., Hanging Rock, O.
Hannah Furnace, Mahoning Valley Iron Co., Youngstown, O.
Hazelton Iron Works, Andrews Bros. & Co., Hazelton, O.
Hecla Furnace, McCoy & Linn, Milesburg, Pa.
Hecla Furnace, Hecla Iron & Mining Co., Ironton, O.
Henry Clay Furnace, Eckhert & Bro., Reading, Pa.
Hermitage Furnace, Ridge Valley Iron Co., Hermitage, Ga.
Himrod Furnaces, Brier Hill Iron & Coal Co., Youngstown, O.
Hopewell Furnace, Edward S. Buckley, 209 S. 3d st., Phila., Pa.
Hopewell Furnace, James Eichelberger & Co., Hopewell, Pa.
Houston Rolling Mills, Houston, Tex.
Howard Iron Works, Howard Rolling Mill Co., Howard, Pa.
Howard Furnace, Howard Rolling Mill Co., Howard, Pa.
Hubbard Furnaces, Andrews & Hitchcock, Youngstown, O.
Hudson Iron Co., Hudson, N. Y.
Hunnewell Furnace, Eastern Kentucky R. R. Co., Greenup, Ky.
Hunts-Lyman Iron Co., Huntsville, Conn.
Huron Furnace, Jackson, O.
Irondale Furnace, F. Nemegyel, Independence, W. Va.
Ironton Furnace Co., Ironton, O.
Iron Star Furnace Co., 12 Campan Bldg., Detroit, Mich.
Irondale Furnace, Puget Sound Iron Co., 328 Montgomery st., San Francisco, Cal.
Isabella Furnace, Jos. D. Potts, 234 S. 4th st., Phila, Pa.
Isabella Furnaces, Isabella Furnace Co., Etna, Pa.
Ivanhoe Furnace, New River Mineral Co., Ivanhoe Furnace P. O., Va.
Jefferson Furnace Co., Oak Hill, O.
Jefferson Iron Works, Steubenville, O.
Jefferson Furnace, J. M. & H. Y. Kaufman, Auburn, Pa.
Joliet Steel Co., Home Ins. Bldg., Chicago, Ill.
Joanna Furnace, L. Heber Smith, Joanna Furnace P. O., Pa.
Jupiter Iron Works, Western Steel Co., St. Louis, Mo.
Katahdin Charcoal Iron Co., Bangor, Me.
Katherine Furnace, C. W. Ahl's Son, Carlisle, Pa.
Kent Iron Co., Kent Furnace P. O., Conn.
Keystone Furnaces, Brooke (E. & G.) Iron Co., Birdsboro, Pa.
Keystone Furnace Co., Reading, Pa.
Keel Ridge Furnace, P. L. Kimberly & Co., Sharon, Pa.
Kemble Furnaces, Kemble Iron Co., Riddlesburg, Pa.
Kirkland Iron Co., Kirkland, N. Y.
Lady Ensley Furnace Co., Sheffield, Ala.
Laurel Furnace, D. M. Reese & Sons, Locust Point, Baltimore, Md.
Lackawanna Iron & Coal Co., Scranton, Pa.
Lanesborough Furnace, Colby, John L., Lanesborough, Mass.
La Grange Furnace Co., Nashville, Penn.
Lawrence Furnace Co., Culbertson, O.
Lake Huron Furnace, Lake Huron Iron Co., Caseville, Mich.
Lemont Furnace, R. Hogsett & Co., Lemont Furnace P. O., Pa.
Lebanon Furnaces, Arthur & Horace Brock, Lebanon, Pa.
Lebanon Valley Furnace, J. & R. Meily, Lebanon, Pa.
Lehigh Iron Co., Allentown, Pa.
Lehigh Zinc & Iron Co., 47 N. Front st., Phila., Pa.
Leesport Furnace, Leesport Iron Co., Leesport, Pa.
Licking Furnace, Swift's Iron & Steel Works, Newport, Ky.
Lime Rock Iron Co., Lime Rock, Conn.
Lobdell Car Wheel Co., Wilmington, Del.
Low Moor Furnace, Low Moor Iron Co. of Va., Low Moor, Va.
Lou-Ellen Furnace, Marshall Car Wheel & Foundry Co., Marshall, Tex.
Locust Grove Furnace, Furstenburg & Adler, Rossville, Md.
Longdale Iron Co., Longdale, Va.
Lochiel Furnace, Robt. H. Coleman, Cornwall, Pa.
Lucy Furnace, John Whitehead, Mt. Union, Pa.
Lucy Furnaces, Carnegie, Phipps & Co. (Ltd.), Pittsburgh, Pa.
Lucinda Furnace, Lucinda Furnace Co., Norristown, Pa.
Lynchburg Furnace, Edward S. Hutter, Lynchburg, Va.
Mabel Furnaces, Perkins & Co. (Ltd.) Sharpsville, Pa.
Macungie Furnace, Macungie Iron Co., 310 Walnut st., Philadelphia, Pa.
Madison Furnace, Clare, Duduit & Co., Rampel, O.
Maiden Creek Furnace, Jacob K. Spang, Lenhartsville, Pa.
Manhattan Iron Works Co., 69 Wall st., N. Y.
Marshall Furnace, Marshall Bros., Newport, Pa.
Marietta Furnaces, Geo. Dawson, Coleman, Pa.
Maryland Furnaces, H. William Ellicott & Sons, Baltimore, Md.
Mary Pratt Furnace, Mary Pratt Furnace Co., Birmingham, Ala.
Mary Furnace, Ohio Iron & Steel Co., Lowellville, O.
Martel Furnace Co., St. Ignace, Mich.
Marion Furnace, Norwegian Iron Co., Minersville, Pa.
Mayville Furnace, Northwestern Iron Co., Insurance Bldg., Broadway, Milwaukee, Wis.
Merion & Elizabeth Furnaces, Merion Iron Co., West Conshohocken, Pa.
Meier Furnaces, Meier Iron Co., 102 N. Main st., St. Louis, Mo.
Menominee Furnace, Menominee Furnace Co., Menominee, Mich.
Mt. Laurel Furnace, Clymer Iron Co., Temple, Pa.
Moselem Furnace, Sheble & Stelwagon, Moselem, Pa.
Millerton Iron Co., Irondale, N. Y.
Milton Furnace, Milton Furnace & Coal Co., Wellston, O.
Mingo Furnaces, Junction Iron Co., Wheeling, W. Va.
Missouri Furnaces, Missouri Furnace Co., 204 N. 3d st., St. Louis, Mo.
Midland Furnace, Midland Blast Furnace Co., Midland, Mo.

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Minneapolis Furnace Co., York Iron Co., Minneapolis, Minn.
Minerva Furnace, Milwaukee Furnace Co., Milwaukee, Wis.
Montgomery Iron Co., Port Kennedy, Pa.
Montour Iron and Steel Co., Danville, Pa.
Mont Alto Furnace, Mont Alto Iron Co., Mont Alto, Pa.
Montgomery Furnace & Chemical Co., Montgomery, Ala.
Mount Vernon Furnace, Geo. N. Gray & Sons., Campbell, O.
Musconetcong Iron Works, Stanhope, N. J.
Muirkirk Furnace, Chas. E. Coffin, Muirkirk, Md.
Norway Furnace, Gabel, Jones & Gabel, Pottstown, Pa.
National Furnace, National Furnace Co., Depere, Wis.
New Jersey Zinc & Iron Co., Newark, N. J
Neshannock Furnace, Crawford Iron & Steel Co., New Castle, Pa.
New York Furnace, N. Y. & Perry Coal & Iron Co., Shawnee, O.
Norristown Iron Works (Isaac McHose & Sons), Norristown, Pa.
North Branch Steel Co., Danville, Pa.
North Cornwall Furnace, W. C. Freeman, Cornwall. Pa.
Norma Furnace, Clinch Valley Coal & Iron Co., 147 S. 4th st., Phila., Pa.
Norton Iron Works, Ashland, Ky.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.
Nova Scotia Furnace, Nova Scotia Iron Co., 9 S. 3d st., St. Louis, Mo.
Ohio & Western Coal & Iron Co., Wesley Block, Columbus, O.
Old Alcalde Furnace, State of Texas owner, Rusk, Tex.
Oliphant Furnace, Fayette Coke & Furnace Co., Oliphant Furnace P. O., Pa.
Olive & Buckhorn Furnaces, McGuckin & Co., Olive Furnace P. O., Ohio.
Onondaga Iron Co., Syracuse, N. Y.
Oswego Furnace, Oregon Iron & Steel Co., Oswego, Ore.
Oxford Iron Works, Oxford Iron & Nail Co., Oxford, N. J.
Passaic Zinc Co., 111 Liberty st., N. Y.
Paxton Furnaces, McCormick & Co., Harrisburg, Pa.
Peekskill Furnace, Empire State Iron Co., 121 Liberty st., N. Y.
Pennsylvania Furnace, Centre Mining Co. (Ltd), Pennsylvania Furnace P. O., Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa viii.
Peninsular Furnace, Peninsular Iron Co., Detroit, Mich.
Pequest Furnace (Cooper & Hewitt), Oxford, N. J.
Phœnix Furnace (Caleb S. Maltby), Millerton, N. Y.
Phila. & Reading Coal & Iron Co., 227 S. 4th st., Phila. Pa.
Philadelphia Furnace (S. Robbins & Son), Kensington, Phila. Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pine Grove Furnace, South Mountain Mining & Iron Co., Pine Grove Furnace P. O., Pa.
Pioneer Mining & Mfg. Co., Birmingham, Ala.
Pine Grove Furnace, Means, Kyle & Co., Hanging Rock, O.
Pilot Knob Furnace, St. Louis Ore & Steel Co., 404 Market st., St. Louis, Mo.
Pine Lake Furnace, Pine Lake Furnace Co., 90 Dearborn st., Chicago, Ill.
Pioneer Furnaces, Iron Cliffs Co., Negaunee, Mich.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Port Oram & Warren Furnaces (Joseph Wharton), Boonton, N. J.
Port Henry Furnace Co., Port Henry, N. Y.
Pioneer Furnaces, Pottsville Iron & Steel Co., Pottsville, Pa.
Powelton Furnaces, Rob't Hare Powels, Sons & Co., 419 Walnut st., Phila., Pa.
Principio Furnace, Geo. P. Whitaker Co., Principio P. O., Md.
Princess Furnace, D. S. Cook, Glen Wilton, Va.
Pulaski Iron Co., 330 Walnut St., Phila., Pa.
Quinnimont Furnace, Quinnimont Coal & Iron Co., 240 S. 3d st., Phila , Pa.
Radford Furnace, Radford Iron Co., Radford Furnace P. O., Va.
Raney & Berger, New Castle, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rebecca Furnace, Kittanning Iron Co., Ltd., Kittanning, Pa.
Red Bank Furnace, David & John D. Reynolds, Red Bank Furnace P. O., Pa.
Reed Island Furnace, Reed Island Iron Co., Reed Island, Va.
Rehoboth Furnace, J. E. Reinhardt, Iron Station, N. C.
Richmond Iron Works, Richmond Furnace P. O., Mass.
Richmond Furnace, Southern Penna. R. R. & Iron & Mining Co , Richmond Furnace P. O., Pa.
Ringwood Furnace (Cooper & Hewitt), Hewitt, N. J.
Rising Fawn Furnace, Walker Iron & Coal Co., Rising Fawn, Ga.
Riverside Furnace, Riverside Iron Works, Wheeling, W. Va.
Robesonia Iron Co., Ltd., Robesonia, Pa.
Rockhill Furnaces, Rockhill Iron & Coal Co., Orbisonia, Pa
Rock Run Furnace, Bass Furnace Co., Rock Run, Ala.
Rockwood Furnaces, Roan Iron Co., Rockwood, Tenn.
Rosena Furnace, Oliver Bros. & Phillips, Pittsburgh, Pa.
Round Mountain Iron Works, Elliott Pig Iron Co., Gadsden, Ala.
St. Charles Furnaces, C. B. Grubb & Son, Lancaster, Pa.
Salisbury Furnace, Salisbury Iron Mfg. Co., Salisbury Furnace, Va.
Sarah Furnace, Cincinnati, O.
Sauk Furnace, Iron Mountain Ore & Furnace Co., Ironton, Wis.
Scioto Furnace, Crawford & Leonard, Scioto Furnace P. O., O.
Secaucus Iron Co., Secaucus, N. J.
Sharon Valley Iron Co., Sharon Valley, Conn.
Sharon Furnace, Boyce, Rawle & Co., Sharon, Pa.
Sharon Iron Co., Sharon, Pa.
Sharpsville Furnace, Sharpsville Furnace Co., Sharpsville, Pa.
Sheffield & Birmingham Coal, Iron & Railway Co., Nashville, Tenn.
Sheffield Furnace Co., Sheffield, Ala.
Shelby Furnaces, Shelby Iron Co., Shelby Iron Works P. O., Ala.
Sheridan Furnaces, Kaufman, Wm. M. & Co., Sheridan, Pa.
Shoenberger Furnaces, Shoenberger, Speer & Co., Pittsb'g, Pa.
Sinking Creek Iron Works, J. Wilcox Brown, Newport, Va.
Sloss Furnaces, Sloss Iron & Steel Co., Birmingham, Ala.
Sligo Furnace Co., 411 Olive st., St. Louis, Mo.
South St. Louis Iron Co., St. Louis, Mo.
Soho Furnace, Moorhead-McCleane Co., Pittsburgh, Pa.
Spearman Furnaces, Spearman Furnace Co., Sharpsville, Pa.
Speedwell Furnace, Knoxville Car Wheel Co., Knoxville, Tenn.
Spring Lake Iron Co., Fruitport, Mich.
Standard Furnace, Standard Charcoal Co., Goodrich, Tenn.
Star Furnace Co., Jackson, O.
Sterling Iron & Railway Co., 45 William st., N.Y.
Stewart Furnace, Stewart Iron Co. (Ltd.), Sharon, Pa.
Stickney Iron Co., 11 S. Gay st., Baltimore, Md.
Steubenville Furnace, Riverside Iron Works, Wheeling, W. Va.
Swede Furnace, Heckscher, R & Sons, 238 S. 3d st., Phila., Pa.

The numbers following names indicate page on which the firm advertises.

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Swatara Furnace, Swatara Furnace Co., Harrisburg, Pa.
Tecumseh Furnaces, Tecumseh Iron Co., Tecumseh, Ala.
Temple Iron Co., Temple, Pa.
Tennessee Coal, Iron & Railroad Co., Nashville, Tenn.
Thomas Iron Co., Hokendauqua, Pa.
Thomas Furnace, Thomas Furnace Co., Miles, O.
Troy Steel & Iron Co., Troy, N. Y.
Topton Furnace Co., Topton, Pa.
Top Mill Furnace, Wheeling Iron & Nail Co., Wheeling, W. Va.
Tropic Furnace, Tropic Iron Co., Jackson, O.
Union Iron Co., Jefferson av., East, Detroit, Mich.
Union Steel Co., 302 1st Nat. Bank Bld., Chicago, Ill.
Union Furnace, Beaver, Marsh & Co., Winfield, Pa.
Van Buren Furnace, Dr. Frank King, Van Buren Furnace P. C., Va.
Vesta Furnace, Columbia Rolling Mill Co., Columbia, Pa.
Vesuvius Furnace, Etna Iron Works, Cincinnati, O.
Victoria Furnace, Goshen Bridge, Va.
Vigo Furnace, Vigo Iron Co., Terre Haute, Ind.
Virginia Nail and Iron Works, Lynchburg, Va.
Vulcan Furnace Co., Newberry & McMillan Bldg., Detroit, Mich.
Warwick Iron Co., Pottstown, Pa.
Warner Furnace, Warner Iron Co., Nashville, Tenn.
Wassaic Furnace, Wassaic, N. Y.
W. B. Wood Furnace Co., Florence, Ala.
Welston Furnace, King, Gilbert & Warner, Columbus, O.
Western Steel Co., St. Louis, Mo.
Williamson Furnace, Williamson Iron Co., Birmingham, Ala.
Windsor Furnace, Daniel B. Fisher, Leesport, Pa.
Wister Furnace, Phila. & Reading R. R. Co., 227 S. 4th st., Philadelphia, Pa.
Woodstock Furnaces, Woodstock Iron Co., Anniston, Ala.
Woodward Iron Co., Woodward, Ala.
Wythe & Speedwell Mining and Iron Mfg. Co., Speedwell, Va.
Zanesville Furnace, Ohio Iron Co., Zanesville, O.

Blast Furnace Builders and Machinery.

Atlas Bronze & Tuyere Co., 2829 Smallman st., Pittsburgh, Pa.
Carroll & Co., D. W. C. (Ltd.), 310 Liberty st., Pittsburgh, Pa.
Fisher Engine Foundry and Machine Works, 23d, 24th and Smallman sts., Pittsburgh, Pa.
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.
Welch, Gloninger & Co., Grant st., c. 6th av., Pittsburgh, Pa.
Welch, Palmer & Maxwell, Grant, c. 6th av., Pittsburgh, Pa.

Blasting Supplies—Fuses, Caps, Etc.

Ætna Powder Co., 98 Lake st., Chic., Ill. **8.**
Atlantic Dynamite Co. (The), 245 B'way, N. Y.
Blight, J. & Sons, Eagle River, Mich.
Clayton Air Compressor Works, 43 Dey st., N. Y. **9.**
Climax Fuse Co. (The), 25 B'way, N. Y.
Hecla Powder Co. (The) 239 B'way, N. Y.
Hercules Powder Co., 40 Prospect st., Cleveland, Ohio. **22.**
Hill, W. N. & Co., Newport, R. I.
James, C. E. & Co., Chattanooga, Tenn.
Laflin & Rand Powder Co., 29 Murray st., N. Y.
Metallic Cap Mfg. Co., 35 Broadway, N. Y.
Miners Supply Co., St. Clair, Pa.
San Francisco Fuse Mfg. Co., Melrose, Cal.
Rendrock Powder Co., 23 Park pl., N. Y. **1.**
Repanno Chemical Co., Wilmington, Del.
Toy, Bickford & Co., Simsbury, Conn.
Vivian & Prince, Houghton, Mich.

Block & Pump Manufacturers.

Atkins, R., Provincetown, Mass.
Avery, Edward P., 207 Long Wharf, New Haven, Conn
Avery, R. J., 35 Sacramento st., San Francisco, Cal.
Aymar, F., Addison, Me.
Baldwin, Frank, 33 South st., N. Y.
Bandel, L. J., 223 Elderry's Wharf, Balt., Md.
Baldwin, F., 33 South st., N. Y.
Barrett, H. C. & Co., 612 Atlantic av., Boston, M.
Brainard, L. Jr., 63 Quay st., Albany, N. Y.
Brown, T., Wellfleet, Mass.
Burnham, N., Rockport, Mass.
Belfast Block Co., Belfast, Me.
Bohnert & Blake, Cleveland, O.
Boston & Lockport Block Co., 162 Commercial st., Boston, Mass. **90.**
Bryant, S., Portland, Me.
Carpenter, G. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Campbell, Leonard A., 30 South st., N. Y.
Channon, H. Co., 26 Market st., Chicago, Ill.
Chicago Block Works, 208 S. Clinton st., Chicago, Ill.
Chisholm, Jesse R., 26 East st., N. Y.
Cleveland Block Co., Cleveland, O.
Coggeshall, C. W., New Bedford, Mass.
Cook, R. H., ft. of Warren st., Balt., Md.
Connor, T., Portland, Me.
Currier, C. H., 28 Market st., San Francisco, Cal.
Davis, E. Jr., East Gloucester, Mass.
Davis, O., Kennebunkport, Me.
DeGrauw Aymar & Co., 34 South st., N. Y.
Delano, W. H., 430 E. Pratt st., Balt., Md.
Detroit Block Works, Detroit, Mich.
Dillingham, W., 49 South st., N. Y.
Dillingham, Wm. G., 51 South st., N. Y.
Doane, H., Beverly, Mass.
Donaldson, J., Salem, Mass.
Donovan, M., Toledo, O.
Dorsey, Hurley & Price, Damascus, Md.
Duncan & Jackson, Bath, Me.
Dwyre, Matthew, ft. E. 119th st., N. Y.
Edgett, G., 30 Sumner st., East Boston, Mass.
Elliot, J., Thomaston, Me.
Ferguson, Wm. B. & Son, 226 South st., N. Y.
Freelove, R. D., Fall River, Mass.
Gardner, C. E., Nantucket, Mass.
Grant, N. & Sons, Yarmouth, Me.
Green, T., Fall River, Mass.
Harcourt, J. F., 106-110 E. Front st., Cincinnati, Ohio.
Harrington, Edwin, Son & Co., 15th st., c. Penn av., Phila., Pa.
Harvey & Tarr, Gloucester, Mass.
Hanson & Co., 40 Main st., San Francisco, Cal.
Hearn, M. J. & Son, 134 Broad st., Boston, Mass.
Hedtler, John, 297 Commercial st., Boston, Mass.
Helmling, C. A., 717 Ramsay st., Balt., Md.
Hicks, Charles N., 175 Lewis st., N. Y.
Herweg, G. J. & Son, r. 173 Suffolk st., N. Y.
Holmes, G. H., Provincetown, Mass.
Holden, P. P. & Son, Bangor, Me.
Ingalls, W., Bath, Me.
Kaler, G. F. & Co., Rockland, Me.
Keene, J., 350 West st., N. Y.
Kennedy, A., Provincetown, Mass.
Klein, H., 24 Lloyd st., Buffalo, N. Y.
Knowlton Bros., Camden, Me.
Langworthy & Brown, 38 South st., N. Y.
Laughlin, Thomas & Son, 267 Federal st., Boston, Mass.
Laughlin, T. & Sons, Portland, Me.
McCoy & Sanders, 26 Warren st., N. Y.
McCusker, J., 518 S. Delaware av., Phila., Pa.
McDonald, A. L., Gloucester, Mass.
McMillan, W. H. Sons, 40 Penn st., B'klyn, N. Y.
McMillan's, W. H. Son, 113 South st., N. Y.
Merry, C., Jersey City, N. J.
Merry, Christopher, 216 Franklin, st. N. Y.
Merry, C., 216 West st., N. Y.
Metcalf, W. A., Thomaston, Me.
Mitchell, E. E., Hughes, c. Henry st., Balt., Md.
Morris, John, 407 West st., N. Y.
Mullins, J., 261 West st., N. Y.
Murch, S. E., Belfast, Me.

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Murch, J. A. & Co., Ellsworth, Me.
Neily, J. W., 1735 Thames st., Balt., Md.
Newhall, H. B. & Co., 105 Chambers st., N. Y.
New Orleans Railway Supply & Mfg. Co., 119 Common st., New Orleans, La.
Norcross, J. W., 226 Commer'l st., Boston, Mass.
Norcross Patent Block Co., Lockport, N. Y.
Ogilvie, A. & Co., Norfolk, Va.
Oldfield, W., Fountain Green, Md.
Overton, J. B., 135 Freeman, st., B'klyn, N. Y.
Pentland & Hahn, 944 N. Main st., St. Louis, Mo.
Penfield Block Co., Buffalo, N. Y.
Pierce, P. C., Sandy Springs, Md.
Pollard, J., Malden, Mass.
Pray, A. C., Bristol, Me.
Rice, C. E., 702 Covington st., Balt., Md.
Richardson, A. S., Reading, Mass.
Robbins, H. B., Castine, Me.
Robbins Block Pine Asso., 168 Commercial st., Boston, Mass.
Rumsey, L. M., Mfg. Co., 810 N. 2d st., St. Louis, Mo.
Shubert & Cottingham, Beach, c. Norris st., Phila. Pa.
Simpson, W., 27 Coenties slip, N. Y.
Sisselberger, J., 588 Oxford st., Balt., Md.
Stanwood, G. M & Co., 261-265 Commercial st., Portland, Me.
Swan, W. D., New Bedford, Mass.
Swift, T. W., New Bedford, Mass.
Taber, E. S., New Bedford, Mass.
Thompson, J., 78 South st., N. Y.
Todd & Brown, Newburyport, Mass.
Turnbull, A. & Co., 1526 Thames st., Balt., Md.
Upson, Walton & Co., Cleveland, O.
Union Block Co., Putnam, Conn.
Walker, L. A., 21 Michigan st., Buffalo, N. Y.
Weir, Daniel J., 7 Bedford st., N. Y.
Whitehead, W. W., 4 N. Pier, Atlantic Dock, B'klyn, N. Y.
Whitehead, W. W., 88 Pike st., N. Y.
White, J. L., 1733 Thames st., Balt., Md.
Willard, J. A., 502 Larkin st., Phila., Pa.

Blocks—Derrick Foot.

Claffy, John, 48 Dey st., N. Y. **91.**

Blocks—Hoisting and Tackle.

Boston & Lockport Block Co., 162 Commercial st., Boston, Mass. **90.**
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Chaplin Mfg. Co. (The), Bridgeport, Conn.
Cleveland Block Co., 159 River st., Cleveland, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Coleman, W. & Son, Providence, R. I.
De Grauw, Aymer & Co., 34 South st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Dubuar, J. A. & Co., Northville, Mich.
Hanscom, H. H., River, n. Ferry st., New Haven, Conn.
Harcourt, J. F., 106-110 E. Front st., Cincinnati, Ohio.
Harrington, E., Son & Co., 15th st. & Penn av., Phila., Pa.
Harvey & Tarr, Gloucester, Mass.
Hite, W. W. & Co., 176-178 4th st., Louisville, Ky.
Hunt & Co., C. W., 111 B'way, N. Y.
McCoy & Sanders, 26 Warren st., N. Y
McDonald, Allan L., Gloucester, Mass.
McMillan's Son, W. H., 113 South st., N. Y.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Micker & Donovan, Toledo, O.
Newhall Co., Henry B., 105 Chambers st., N. Y.
Pearsall, C., Detroit, Mich.
Penfield Block Co., Lockport, N. Y.
Reed Mfg. Co., Canajoharie, N. Y.
Reed Mfg. Co., Lockport, N. Y.
Rogers, H. A., 19 John st., N. Y. **1v.**
Strange's Machine Works, Taunton, Mass.
Shubert & Cottingham, Phila., Pa.
Steubner & Woods, 168 E. 3d st., L. I. City, N. Y.
Toledo Block Works, 205-209 Water st., Toledo, O.
Topping & Fox, 96 Chambers st., N. Y.
Upson, Walton & Co., 159 River st., Cleveland, O.
Ward & Brady, 517 N. Level st., St. Louis, Mo.
Yale & Towne Mfg. Co., Stamford, Conn.

Blocks—Paving.

Asphalt Block Co., Norristown, Pa.
Haydenville Mining and Mfg. Co., Haydenville, O.
Manuel, H. C., Sonoma, Cal.
Martin's Bed Rock and Emery Works, Bainbridge, N. Y.
Michigan Paving Block Co., Midland, Mich.
Partridge & Miles, Sonoma, Cal.
Rockport Stone Co., Rockport, Mass.
Ross, F., Miller & Co., Vassar, Mich.
Ross Patent Paving Block Co., Bay City, Mich.
Woodruff, W. J. & Co., Copley, Mich.

Blocks—Sectional, for Locomotive Boilers.

Magnesia Sectional Covering Co., 9 N. 5th st., Phila., Pa.
Chicago Retort & Fire Brick Works, 45th and Clark sts., Chicago, Ill.

Bloomaries.

Altoona Bloom Iron Works, G. W. & F. Palmer & Co., Alder Bend, N. Y.
Anniston Bloomary, Anniston, Ala.
Bloomingdale Forge, Martin J. Ryerson, Bloomingdale N. J.
Canton Bloomary Co., Collinsville, Conn.
Carlisle Iron Works, J. C. Bucher, Boiling Springs, Pa.
Charming Forge, W. & B. F. Taylor, Womelsdorf, Pa.
Chateaugay Ore & Iron Co., Plattsburg, N. Y.
Cove Forge, Wm. McIlvain & Sons, Reading, Pa.
Eagle Forge, Curtins & Co., Roland, Pa.
Eagle Forge, Crockett Depot, Va.
Ellendale Forge, J. H. Lich & Co., Ellendale Forge P. O., Pa.
Ellwood Forge, Ellwood, Pa.
French Creek Forge, Esther Kaufman, St. Peters P. O., Pa.
Gibraltar Iron Works, Simon Seyfert & Co., Reading, Pa.
Gray's Ferry Iron Works, Edward S. Buckley, 209 S. 3d st., Phila., Pa.
Graham's Forge, Graham & Johnson, Graham's Forge P. O., Va.
Howard Iron Works, Howard, Pa.
Juniata Forge, J. A. & E. Eichelberger, Petersburg, Pa.
Keene Forge, W. F. & S. H. Weston, Keene, N. Y.
King Bros., Drakesville, N. J.
Laurel Forge, South Mountain Mining & Iron Co., Pine Grove Furnace P. O., Pa.
Lebanon Rolling Mills, Samuel E. Light, Lebanon, Pa.
Liberty Forge, Boyer Bros., Lisburn, Pa.
Lucknow Forge, John W. Reily, Harrisburg, Pa.
McCullough Iron Co., Northeast, Elkton & Rowlandville, Md.
Milesburg Iron Works, McCoy & Linn, Milesburg, Pa.
Mont Alto Iron Works, Mont Alto, Pa.
Northeast Forge, McCullough Iron Co., Northeast, Md.
Paulding Forge, Graff, Bennett & Co., Cecil, O.
Paterson Bloomary, Peter Oberg & Co., Paterson, N. J.
Payne's Forge, D. F. Payne, Wadham's Mills, N. Y.
Perry Forge, Seidel Bros., Marysville, Pa.
Pine Forge, J. C. Frederick & Co., Mount Jackson, Va.
Powerville Forge, B. O'Day, Boonton, N. J.
Port Oram Forge, Port Oram Mfg. Co., Port Oram, N. J.
Principio Forge, Geo. P. Whitaker Co., Principio Furnace P. O., Md.

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Roan Mountain Steel & Iron Co., Wilders, N. C.
Rockaway Forge, T. H. Hoagland, Rockaway, N. J.
Rocky Point Forge, Dr. J. W. Patten, Murphy, N. C.
Spring City Forge, Francis & Co., Spring City, Pa.
Springton Forge, M. K. Genner, Wallace, Pa.
Steam Forge, Rockaway, N. J.
Tyrone Forges, Tyrone Iron Co., Tyrone, Pa.
Warren Forge, American Sheet Iron Co., Phillipsburg, N. J.
Wood, Wm. W., Wood's Falls, N. Y.
Wilmington Forge, W. F. & S. H. Weston, Wilmington, N. Y.
Williamsport Iron & Nail Works, Williamsport, Pa.
Windham Forge, Geo. E. Righter, Parsippany, N. J.

Blowers.

Aland Patent Blower Co., Rome, N. Y.
Aller, A., 109 Liberty st., N. Y.
Baird, U., Machinery Co., 75 Water st., Pittsburgh, Pa.
Bender Bros., Columbia, Pa.
Beggs, James & Co., 9 Dey st., N. Y.
Boston Blower Co., 276 Franklin st., Boston, M.
Buffalo Forge Co., Buffalo, N. Y.
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Champion Blower & Forge Co., 26 E. James st., Lancaster, Pa.
Cooke & Co., 22 Cortlandt st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Donegan & Swift, 174 Fulton st, N. Y.
Empire Portable Forge Co. (The), Cohoes, N. Y.
Exeter Machine Works, 19 Federal st., Boston, Mass.
Foos Mfg. Co. (The), Springfield, Mass.
Garden City Fan Co., 50-57 W. Washington st., Chicago, Ill.
Guild & Garrison, B'klyn, N. Y.
Healy Iron Works, N. 4th & 5th sts., B'klyn, N.Y.
Hungerford Co. (The), 97 Park pl., N. Y.
Huyett & Smith Mfg. Co., 1403 Russell st., Detroit, Mich.
Landis, Ezra F., 537 N. Cherry st., Lancaster, Pa.
Packard, O. L., Milwaukee, Wis.
Parke & Lacy, 8 California st., San Francisco, Cal.
Rahway Mfg. Co., Rahway, N. J.
Roots, P. H & F. M. Co., Connersville, Ind.; 22 Cortlandt st., N. Y.
Sherriff & Ashworth Machinery Co., 80 Water st., Pittsburgh, Pa.
Simpson Bros., Canandaigua, N. Y.
Sturtevant, B. F., Jamaica Plain Station, Boston, Mass.
Stewart Heater Co., 37 Clinton st., Buffalo, N.Y.
Townsend, S. S., 22 Cortlandt st., N. Y.
Tubular Barrow & Machine Co., 169 14th st., Jersey City, N. J. **32.**
Unadilla Machine Works, Unadilla, N. Y.
Watertown Steam Blower Co., 35 Liberty st., N. Y.

Blowers—Hand.

Star Machine Co., 198 Terrace st., Buffalo, N.Y.

Boat Fittings.

Rushton, J. H., Canton, N. Y.

Boat Builders—Canvas.

Osgood, N. A., Battle Creek, Mich.

Boat Builders—Electric.

Rushton, J. H., Canton, N. Y.

Boat Builders—Iron.

Nafie & Levy, Beach and Palmer sts., Philadelphia, Pa **26.**
Pittsburgh Iron & Steel Boat Bldg. Co., Pittsb'g, Pa.
Western Iron Boat Bldg. Co., St. Louis, Mo.

Boat Builders—Metallic, Life.

Smith, John T., 159 South st., N. Y.

Boat Builders—Row and Sail.

Ayers, Samuel, 37 Peck Slip, N. Y.
Barney Dumping Boat Co., 319 B'way, N. Y.
Buck, H. H., Orland, Me.
Coffin, Holmes W., Addison, Me.
Cohane, Daniel, 368 South st., N. Y.
Delano, Joshua, Fairhaven, Conn.
Eldridge, S. B., New Bedford, Mass.
Fennell & Sopher, 234 South st., N. Y.
Hayes, Edwin A., 262-263 West st., N. Y.
Hoffman & Bro., 391 South st., N. Y.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Kyle, William, Brown pl., n. E. 130th st., N. Y.
Moriarity, James, 198 South st., N. Y.
Moss, James, 26 East st., N. Y.
Oliver, Wm., ft. E. 132d st., N. Y.
Pope Mfg. Co., 291 Wabash av., Chicago, Ill.
Pryor, W. K. & Co., ft. M st., So. Boston, Mass.
Racine Hardware Mfg. Co., Racine, Wis.
Radix Mfg Co., 39 Old slip, N. Y.
Roberts, Stephen, 363 South st., N. Y.
Rushton, J. H., Canton, N. Y.
Sheldon, Orin & Co., 394 Atlantic av., Boston, Mass.
Simms, Jas. P., St. Louis, Mo.
Smith, John T., 159 South st., N. Y.
Thoms, Christian J., 436 West st., N. Y.
Trott, C., Kennebunkport, Me. **46.**
Turner, C. D., Isle Au Haut, Me. **46.**
Vinal, C. M. & Son, Orono, Me. **67.**
Vought, Peter, ft E. 135th st., N. Y.
Warren, Paul B., South Providence, R. I.
Wood, A. B. & Son, 154 South st, N. Y.

Boat Builders—Tow and Propellers.

Atlantic Works, East Boston, Mass.
Briggs, J. E., 140 E. 41st st., N. Y.
Douglas, W. & Sons, 39 Carson st., Pittsbg'h Pa.
Nafie & Levy, Beach and Palmer sts., Philadelphia, Pa. **26.**
Rees & Thorn, Duquesne Way and 1st st., Pittsburgh, Pa.

Boiler—Compounds and Cleaners.

Amazon Chemical Mfg. Co., 39 Michigan st., Chicago, Ill.
Am. Boiler Purger Co., 82 John st., N. Y.
Bay State Boiler Compound Co., 31 Doane st., Boston, Mass.
Bell, T. J. & Co., 2d st. and B'way, Cincinnati, Ohio.
Blakesley & Co., Springfield, Ill.
Bond, J. C. & Co., 10 S. Canal st., Chicago, Ill.
Bradshaw, Crocker & Co., 31 Doane st., Boston, Mass.
California Feed Water Purifying Co., 142 Montgomery st., San Francisco, Cal.
Champion City Oil Co., Springfield, O.
Challenge Mfg. Co., 129 Ohio st., Terre Haute, Ind.
Clark, John L., 256 South st., N. Y.
Chester, Thomas L., 227 W. Houston st., N. Y.
Cincinnati Boiler Cleaning Co., 274 Sycamore st., Cincinnati, O.
Cockshutt & Lord, Savannah, Ga.
Collins J & Son, Conshohocken, Pa.
Crescent Mfg. Co., 3-5 Michigan st., Cleveland, Ohio.
Darcy, J. R., 239 Jackson st., Chicago, Ill.
Davis & Sibley, 261 West st., N. Y.
Davis, Jacob B., 261 West st., N. Y.
Downie Boiler Incrustation Preventive Co., 7 1st st., San Francisco, Cal
Downie, E., Boiler Scale Preventive, 71 Hudson st., N. Y.
Downer, A. H & Co., 273 Water st., N. Y.
Empire Hydro-Carbon Co., 18 Exchange pl., N. Y.
Emery & Co., Ltd., 23 7th st., Phila., Pa.

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Eureka Vegetable Boiler Scale Eradicator Co., 112 S. Frederick st., Balt., Md.
Fullam, Lucien W., 42 Hudson st.. N. Y.
Gleason Boiler Compound Co. (The), Cleveland, Ohio.
Girard, Hyacinth & Sons, 376 S. Canal st., Chicago, Ill.
Goldstein, William, 490 Cherry st., N. Y.
Griggs J. E. & Co., Indianapolis, Ind.
Groves, James H., 26 Church st., N. Y.
Guthrie & Co., 247 Division st., Chicago, Ill.
Harrison & Hunt, 1104 Penn av., Phila., Pa.
Hotchkiss, James F., 120 Liberty st., N. Y. **68.**
Houghton & Co., 42 Hudson st , N. Y.
Hunt, John A., 701 S. West st., Indianapolis, Ind.
Imperial Chemical Co., 324 St. John st., Phila., Pa.
International Mfg. Co., 274 Pearl st., Cleveland, O.
Jackson, B., 625 6th st., San Francisco, Cal.
Jones, H. W., 44 Broad st., N. Y.
Kenzel, John S., 15 New Chambers st., N. Y.
Knoxville Car Wheel Co., Knoxville, Tenn.
Kohlbrand, H., 690 Eastern av., Cincinnati, O.
Landsberg, M., 98 S. 5th av., N. Y.
Lavo, J. J., Union Stock Yards, Ill.
Litofuge, Mfg. Co., 115 B'way, N. Y.
Lightall, J. N. & Bro., 259 W. Congress st., Chicago. Ill.
Lightning Scale Solvent Co., 1014 Park av., St. Louis, Mo.
Lord, George W., 316 Union st., Phila., Pa. **81.**
Lye, L. N. & Son, Lima, O.
Maclehose, Leonard F. S., 44 Broad st., N. Y.
McJilton & Co., 17 Thompson st., N. Y.
Meeks, Alfred E., 158 Reade st., N. Y.
Meier & Patterson, 41 Centre st., N. Y.
Merrell, I. L., 316 Townsend st., San Francisco, Cal.
Mepham, T. E. & Co., Doane, c. Kilby st., Boston, Mass.
Miller, W. B., 220 N. Water st., Phila., Pa.
Moore & Co., 296 Dearborn st., Chicago, Ill.
Ohio Scale Solvent Co., 27 Gleen Bld., Cincinnati, O.
Pfaltz & Co., 48 Pine st., N. Y.
Phelan, M., Troy, N. Y.
Pittsburgh Boiler Scale Resolvent Co., Lewis Bldg., Pittsb'g, Pa.
Ranken Scale Eradicator Co., Exeter, N. H.
Robertson, R. S., 12 Smithfield st., Phila., Pa.
Rudolf, W. B. & Co., 216½ E. 18th st., Chicago, Ill.
St. Louis Boiler Cleaner Mfg. Co., 600 N. 2d st., St. Louis, Mo.
Schermerhorn B. M., 349 N. 3d st., Phila., Pa.
Schwartz, C., 106 Liberty st.. N. Y.
Shaw & Lobo, 535 Pavonia av., Jersey City, N. J.
Stevenson Bro. & Co., 132 S. 2d st., Phila., Pa.
Stuart, D. A. & Co., 8 State st.. Chicago, Ill.
Stewart Boiler Solution Co. (Ltd.), 1120 Vine st., Phila., Pa.
Stewart Boiler Solution Co., 319½ Market st., Newark, N. J.
Trask & Carmichael, 80 Center st., N. Y.
Turner, C. A., 12 Market st., Phila., Pa.
Vane Allen, 201 E. Randolph st., Chicago, Ill.
Van Duzen's Vegetable Boiler Cleaner Compound. 110 E. 2d st., Cincinnati, O.
Watson & Co., 122 Market st., San Francisco, Cal.
Weaver, J. H. & Co., 505 Eastern av., Cincinnati, Ohio.
Whetstone & Grace, 921 Filbert st., Phila., Pa.
Willing, C. G., 88 John st., N. Y.
Winn Boiler Compound Co., 106 Olive st., St. Louis, Mo.
Wright & Berger, 108 Canal st., Cleveland, O.

Boiler Feeders.

Fritz, Geo. J., 2018 S. 3d st.. Phila., Pa.
Hill, Jasper N., Anderson, Ind.
Kieley, Timothy, 9 W. 13th st., N. Y.
Laidlaw & Dunn Co., Cincinnati, O.
McGowan, John H., Co. (The) 134 W. 2d st., Cincinnati, O.
Miller Mfg. Co., Canton, O.
Watson & Zahniser, Erie, Pa.

Boiler Flues.

Byers, (A. M.) & Co., Pittsburgh, Pa.

Boiler Heads Flanged.

Carroll & Co., D. W. C. (Ltd), 310 Liberty st., Pittsburgh, Pa.
Luken's Rolling Mills, Chas. Huston & Sons, Coatesville, Pa.

Boiler Makers.

Abendroth & Root Mfg. Co., 28 Cliff st., N.Y.; 70 Kilby st., Boston; 115 Dearborn st., Chicago. **111.**
Ackley, Myers F., 1416 Washington st., Phila, Pa.
Ætna Iron Works, 217 Fremont st., San Francisco, Cal.
Ætna Steam Boiler Works, Marysville, Cal.
Ahern. D. & Co., 46 Jefferson st., N. Y.
Ainslee, Cochran & Co., Main & 10th sts., Louisville, Ky.
Albertson & Douglass Machine Co., 97 Main st., New Haven, Conn.
Allen, Wm. & Sons, Worcester, Mass.
Allen & Struble, Oskaloosa, Iowa.
Allewelt, W., 530 W. 50th st., N. Y.
American Steam Boiler & Machine Works, Chicago, Ill.
Amerman, Peter & Son, 108 Commerce st., Hartford, Conn.
Ames Iron Works, 18 S. Canal st., Chicago, Ill.
Ames Iron Works, 38 Cortlandt st., N. Y.
Anderson-Asire Co., South Bend, Ind.
Anderson, V. D. & Son, 240 Lake st., Chicago, Ill.
Angstedt, A., 30 W. Center st., Cleveland, O.
Archambault, A. L., Marlborough, c. Beach st., Phila., Pa.
Arnold, G. W. & Son, Ionia, Mich.
Armitage, Hersch, Tonawanda, N. Y.
Armstrong Bros., Springfield, O.
Ashcroft, Chas. E., 49 Mason Bldg., Boston, Mass.
Ashland Boiler Works, Ashland, Wis.
Asire-Anderson Co., South Bend, Ind.
Atlantic Works, 72 Border st., E. Boston, Mass.
Atwell & Co., 94 Liberty st., N. Y.
Automatic Boiler & Engine Co., New Haven, Conn.
Automatic Safety Boiler & Engine Co. (The), 127 Water st., New Haven, Conn.
Babbitt, Wood & Co., New Bedford, Mass.
Babcock & Wilcox Co., 561 Mission st., San Francisco, Cal.; 64 S. Canal st., Chicago, Ill; 98 4th av., Pittsburgh, Pa.; 32 N. 5th st., Phila., Pa.; 217 E. Fayette st., Balt., Md.; 65 Oliver st., Boston, Mass.; 30 Cortlandt st., N. Y.
Bailey Mfg. Co., Owasso, Mich.
Baker, J., Muscatine, Iowa.
Baltimore Steam Boiler Works, 40 S. Front st., Balt., Md.
Baragwanath, Wm. & Son, 48 W. Division st., Chicago, Ill.
Barber Bro., 43 Pearl st , Syracuse, N. Y.
Barnes, Chas. & Co., 40 Sycamore st., Cincinnati, Ohio.
Barnhill, J. B., Bellaire, O.
Barrett's, B. Sons & Co., Wooster, O.
Barth, Henry, Charlevoix, Mich.
Bartlett, Hayward & Co., Pratt, c. Scott sts., Balt., Md.
Barton, H., Charlestown, W. Va.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Basshor, Thos. C. & Co., 28 Laight st., Balt., Md.
Bate, W. T. & Son, Conshohocken, Pa.
Battis, M. I., Oshkosh, Wis.
Bay State Iron Works, Erie, Pa.
Beach, H. B. & Sons, 135 Grove st., Hartford, Conn.
Beatty & Kipp, Youngstown, O.
Beckman & Middleton, 3105 Water st., Wash'n, D. C.
Bee, Joseph, 60 Fulton st., Chicago, Ill.
Beggs, James & Co., 9 Dey st., N. Y.
Belfield, H. & Co., 433 N. Broad st., Phila., Pa.
Bell, D., Evans, c. Norton sts., B'klyn, N. Y.

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Belmor, Geo. E., 210 Mission st., San Francisco, Cal.
Benjamin & Co., 17 S. Canal st., Chicago, Ill.
Best, John & Son, Lancaster, Pa.
Bigelow Co., 17 Cortlandt st., N. Y.
Bigelow Co. (The), River st., New Haven, Conn.
Biggs, L. M., Akron, O.
Birch, F. F., Dover, N. J.
Bittern, J., 38 Lafayette st., New Orleans, La.
Blake, Geo. F. Mfg. Co., 95 Liberty st., N. Y.
Blandy, F. J. L., Zanesville, O.
Blaney, R. & Son, Union Stock Yards, Ill.
Blymer Mfg. Co., McLean av., Cincinnati, O.
Booth, S., 545 W. 35th st., N. Y.
Borger Bros. & Co., Columbus, O.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Boswell, G. H., foot 7th st, Washington, D. C.
Bothman, C., Galveston, Tex.
Bovaird & Seyfang, Bradford, Pa.
Bowland, F. C. & A. C., 413 Chapel st., New Haven, Conn.
Branagan & Heyman, Palestine, Tex.
Brayton, Geo. B., Providence, R. I.
Brennan, John & Co., 194 Larned st. W., Detroit, Mich.
Brennan, W., Barnhart's Mills, Pa.
Brenneman & Ward, 20 Penn st., Pittsb'g, Pa.
Brewer, S. D., 55 Broadway, N. Y.
Bridgeport Boiler Works, Housatonic R. R., near Congress st. Bridgeport, Conn.
Brightman Stoker Co., 168 Bank st., Cleveland, O.
Brock & Murphy, 241 Medford st., Charlestown, Mass.
Brooks Locomotive Works, Dunkirk, N. Y. 17.
Broomell & Sanks, York, Pa.
Bronich, J., Topeka, Kan.
Brown, A. J., Paterson, N. J.
Brown & Bros., Tubing and Boiler Works, Waterbury, Conn.
Brownell, E. H. & Co., Dayton, O.
Brownell, J. R. & Co., Omaha, Neb.
Bryson, R., 235 Mill st., Rochester, N. Y.
Buckeye Engine Co., Salem, O.
Buckeye Engine Co., S. Clinton, c. W. Jackson st., Chicago, Ill.
Buckeye Bridge & Boiler Works, 193 Lake st., Chicago, Ill.
Bucyrus Boiler Works, Bucyrus, O.
Bullock (M. C.) Mfg. Co., 188 Jackson st., Chicago, Ill. 10. & 11.
Burleigh Rock Drill Co., Fitchburg, Mass.
Burleigh Rock Drill Co., Liberty st., N. Y.
Burnett, W. H., Newark, N. J.
Burns, A., Oshkosh, Wis.
Burns, D. M., Fort Howard, Wis.
Burr, W. H. & Co., 126 Reed st., Phila., Pa.
Butman Furnace Co., 8 S. Canal st., Chicago, Ill.
Byron & Flegle, Minneapolis, Minn.
Cady, A., Steubenville, O.
Campbell, W. & Co., 356 Main st., Cambridgeport, Mass.
Campbell, Walsh & Gilson, 25 E. 4th st., St. Paul, Minn.
Canton & Slater, Barnharts Mills, Pa.
Canty, J. F., Tiffin, O.
Cardell, James D., 1900 Passy'k av., Phila., Pa.
Carlin's, Thos. Sons, Lacock & Sandusky sts., Allegheny, Pa.
Carnie, John A., 223 West st., N. Y.
Carroll, P., 1229 Mt. Vernon st., Phila., Pa.
Carroll & Co., D. W. C., Ltd., 310 Liberty st., Pittsb'g, Pa.
Carter, J. V. Co., Bordentown, N. J.
Casley, J., Barnharts Mills, Pa.
Caulfield, Hunt & Co., Richmond, Ind.
Central Falls Steam Boiler Works, Central Falls, R. I.
Chesley, J. T., Danville, Ill.
Chester Foundry & Machine Co., Chester, Pa.
Chicago Steam Boiler & Engine Works, 68 Michigan st., Chicago, Ill.
Chicago Tubular Well Works, Lake and Clinton sts., Chicago, Ill.
Chollar, G. W. & Co., Fort Worth, Texas.
Chuffuck, F. E. & Son, 971 Tremont st., Boston, Mass.
Cincinnati Steam Heating Co., 187 W. Pearl st., Cincinnati O.
Claffy, John, 48 Dey st., N. Y. 91.
Claflin, C. J. & Co., Gaspee st., Providence, R. I.
Clark, J. & Co., S. Side Basin, Balt., Md.
Clayton Air Compressor Works, 43 Dey st., N. Y. 9.
Cleveland Ship Building Co., Detroit, c. Centre st., Cleveland, O.
Cleveland Steam Boiler Works, 27 Centre st., Cleveland, O.
Cleveland & Hardwick, Erie, Pa.
Cliff & Co., Terre Haute, Ind.
Clinton Boiler Works, Clinton, Ia.
Coatesville Boiler Works, Coatesville, Pa.
Codd, E. J. & Co., 700 S. Caroline st., Balt., Md.
Codd, W. C., 2010 Aliceanne st., Balt., Md
Cody & Lamb, Peoria, Ill.
Coghlan, F. 20-28 Crescent st., Holyoke, Mass.
Coughlin, J. E., 760 Bryant st., San Francisco, Cal.
Cole Bros., Pawtucket, R. I.
Coleman, H. D., 9 Perdido st., New Orleans, La.
Coleman, J. T., 242 N. Broadway, Balt., Md.
Coleman, T. R., 3d av. N. and 4th st., Minneapolis, Minn.
Colliau, V., 287 Jefferson av., Detroit, Mich. 70.
Collins, Chas., 56 S. 5th st., Brooklyn, N. Y.
Collins, H. E. & Co., 34 Lewis block, Pittsburgh, Pa.
Collins Iron Works, foot W. 21st st., N. Y.
Collins, Wm. & Son, foot W. 21st st., N. Y.
Collins & McKinney, Amsterdam, N. Y.
Conklin, C. W., Auburn, N. Y.
Connelly Bros., Bradford, Pa.
Connery, R. M., 808 Master st., Phila., Pa.
Cooke & Co., 23 Cortlandt st., N. Y.
Cooper Co., C. & G., Mt. Vernon, O.
Copeland & Bacon, 85 Liberty st., N.Y.
Corbett & Norrish, 1416 F st., Washington, D. C.
Corliss Steam Engine Co., Railroad Crossing, Providence, R. I.
Correy, J. C., Massillon, O.
Corry City Iron Works, Corry, Pa.
Cox & Morrison, Wheeling, W. Va.
Cox & Sons, Bridgeton, N. J.
Craig, A. J., Fargo, Dak.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Cramp, W. & Sons, Beach, c. Norris sts., Phila., Pa.
Crawford, J. J., Nashua, N. H.
Crescent Mfg. Co., 3-5 Michigan st., Cleveland, O.
Cruickshank, G. M., 286 Dyer st., Providence, R. I.
Cuddy, James, 43d st., & A. V. R. R., Pittsb'gh, Pa.
Cumming & Myers, 607 Cherry st., Phila., Pa.
Cunningham, C., 627 Greenpoint av., Brooklyn, N. Y.
Cunningham Iron Works Co., 109 Milk st., Boston, Mass.
Curtis, F. J., Spencerport, N. Y.
Dailey, J., Kansas City, Mo.
Dana, R. W., Lake Village, N. H.
Darbe, H. C., Kansas City, Mo.
Davies, T. E., Ludington, Mich.
Davis, R., Oregon st., Milwaukee, Wis.
Davis & Burke, Newton, Kan.
Davis & Sprouts, Ashland, Pa.
Davidson & Doellman, Hamilton, O.
Deeley, R & Co., ft. W. 32d st., N. Y.
Delamater, C. H. & Co., 21 Cortlandt st., N. Y.
Delany, P., Newburgh, N. Y.
Dempster Engine Works, 34-40 Washington st., B'klyn, N. Y.
Desner & Ritchie, ft. Aubin av., Detroit, Mich.
De Soto Steam Boiler Works, 1838 1st st., N., Minneapolis, Minn.
Devine, Peter, 387 S. Canal st., Chicago, Ill.
Devine's Steam Boiler Works, 383-398 S. Canal st., Chicago, Ill.
Dickson Mfg. Co., Scranton, Pa.
Dickson & De Land, 127 E. Water st., Syracuse, N. Y.
Dillon, D. M., Fitchburg, Mass.
Dobbins, R., Lowell, Mass.

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Donald & McKenzie, 17 S. Front st., New Orleans, La.
Donegan & Swift, 174 Fulton st., N. Y.
Donohue, P. J. & Sons, Wythe av., c. Wallabout st., B'klyn, N. Y.
Doty, R., Cleveland, O.
Dougherty, Jas. T., Dayton, O.
Dougherty & Feeley, Chester, Pa.
Dougherty & Morrison, Duquesne Way, n. Point, Pittsburgh, Pa.
Downer, S. B., & Son, Streator, Ill.
Downes, A. N. & Co., 308 N. 3d st., Phila., Pa.
Driskell, Thos. J. & Co., Columbus, O.
Drummond, T., New London, Conn.
Dry Dock Engine Works, c. Atwain & Dequindre sts., Detroit, Mich.
Duffy, Jas. J., Waterbury, Conn.
Duncan, A. & Son, Charleston, S. C.
Dundon, P. F., 131 Folsom st., San Francisco, Cal.
Dunn, J. M., Norwalk, O.
Durant, E. S., Racine, Wis.
Eagle Boiler Works, Maryland, bet. Indiana & Illinois avs., Brooklyn, N. Y.
Eagle Iron Works, 252 Woodbridge st., Detroit, Mich.
East End Boiler Works, ft. Aubin av., Detroit, Mich.
Edge Moor Iron Co., 1600 Hamilton st., Phila., Pa.
Elm City Iron Works, Erie, Pa.
Ensign, A. B., Rochester, N. Y.
Enterprise Boiler Co., Youngstown, O.
Erie City Iron Works, 9 Dey st., N. Y.; Erie, Pa.
Erie Engine Co., Erie, Pa.
Eureka Steam Heating Co., 302 State st., Rochester, N. Y.
Everingham & Hogg, North, c. Mount st., Troy, N. Y.
Evison, J. W., Milwaukee, Wis.
Excelsior Iron Works, 100 N. Clinton st., Chicago, Ill.
Excelsior Iron Works Co., Cleveland, O.
Excelsior Machine & Boiler Works, 341 S. Canal st., Chicago, Ill.
Exeter Machine Works, Exeter, N. H.; 19 Federal st., Boston, Mass.
Eyre, Henry C. & Co., Chester, Pa.
Fairnie & Geer, 110 Basin st., Syracuse, N. Y.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Farrar & Teft, 60 Perry st., Buffalo, N. Y.
Farrell, Logan & Sons, 60 Commercial st., Brooklyn, N. Y.
Farrin, J. & Co., Martinsburg, W. Va.
Fawcett, P., Burlington, Iowa.
Filer & Stowell Co. (Ltd.) Milwaukee, Wis.
Fischer, Wm., 1906 N. 5th st., Phila., Pa.
Fisher, C., 41 N. 2d st., Brooklyn, N. Y.
Fishkill Landing Machine Co., Fishkill, N.Y. 1v.
Fiske, A. S., 64 Johnson Bldg., Cincinnati, O.
Fitchburg Steam Engine Co., Fitchburg, Mass.
Flanigan, Sullivan & Jamison, Mansfield, O.
Fletcher, W. & A. C., 266 West st., N. Y.
Flynn, D., Fall River, Mass.
Foley, P. J., Vicksburg, Miss.
Forsaith, S. C., Machine Co., Manchester, N. H.
Foster, F. A., Atchison, Kan.
Fox, George & Son, 511 W. 34th st., N. Y.
Fox, R., Vicksburg, Miss.
Fraser & Chalmers, N. Union, s. w. c. Fulton st., Chic., Ill.
Frazier, E. H., 1806 Thames st., Balt., Md.
Freeman, S. & Son, Mfg. Co. (The), Racine, Wis.
Frick Co., Waynesboro, Pa., and Kansas City, Mo.
Fritz, Geo. J., 2018 S. 3d st., St. Louis, Mo.
Froehlich, J. C. & Co., 1301 Philpot st., Baltimore, Md
Fuller Iron Works, 416 S. Main st., Providence, R. I.
Fulton Boiler Works, Richmond, Ind.
Funk, M., La Crosse, Wis.
Furlong & Lee, Des Moines, Ia.
Gainesville Foundry & Machine Works, Gainesville, Fla
Garstang, R., 1243 S. 2d st., St. Louis, Mo.
Geiser Mfg. Co., Waynesboro, Pa.
Gem City Boiler Works, Quincy, Ill.
Gifford, J. A., Atlanta, Ga.
Gilman, A., 1106 Beach st., Phila., Pa.
Glenn, M. W., 5th av. S., bet. 1st and 2d sts., Minneapolis, Minn.
Globe Iron Works, Elm, c. Spruce st., Cleveland, O.
Globe Steam Heater Co., North Wales, Pa.
Golden State & Miner's Iron Works, San Francisco, Cal.
Goldner, H., Tasker St. Whf., Phila., Pa.
Gold's Heater Mfg. Co., 624 E. 14th st., N. Y.
Gordon, Strobel & Laureau (Ltd.), 708 Penn av., Pittsb'g, Pa.
Gorman & Pettitt, Alexandria, Va.
Gorton Boiler Mfg., Co., 110 Centre st., N. Y.
Gorton & Lidgerwood Co., 96 Liberty st., N. Y.
Goshen Safety Boiler Co., 39 Dey st., N. Y.; Goshen, N. Y.
Gray, Robert J., 502 West st., N. Y.
Gray, R., ft. E. 131st, N. Y.
Gray & Wildman, East Saginaw, Mich.
Greenfield, W. G. & G., 5th, c. Cross sts., E. Newark, N. J.
Greenwald, I. & E., 248 E. Pearl st., Cincinnati, O.
Gregory, H. P. & Co., Fremont & Mission sts., San Francisco, Cal.
Grimm, Henry, Quincy, Ill.
Grupe & Murray, Davenport Iowa.
Gubbins, John, 341 S. Canal st., Chicago, Ill.
Guynan, R. B., 1436 Callowhill st., Phila., Pa.
Hadley, Wright & Co., 113-115 S. Tennessee st., Indianapolis, Ind.
Haffner & Baird, W. 22d, c. Blue Island av., Chicago, Ill.
Hagan & Daly, ft. 7th st., Long Island City, N.Y.
Hall, J. V., 304 Beale st., San Francisco, Cal.
Hall & Ingram, Springfield, Ill.
Hammond & Coon, 244 Perry st., B'klyn, N. Y.
Hammond & Guild, Buffalo, N. Y.
Hamilton, Leach & Madden, Main, c. Folsom sts., San Francisco, Cal.
Hampson, Edward P. & Co., 36 Cortlandt st., N. Y.
Handren & Robbins, 126 Washington st., N. Y.
Harding, J. D. & Co., Mankato, Minn.
Hardwicke & Ware, Buffalo, N. Y.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Harmes, A. G., 92 1st av., Pittsb'g, Pa.
Harney, W., 1318 Girard av., Phila., Pa.
Harris, J., Titusville, Pa.
Harris, W. A., Park st., Providence, R. I.
Harrisburg Boiler Works, Harrisburg, Pa.
Harrisburg Car Mfg. Co., Harrisburg, Pa. 7.
Harrison Safety Boiler Works, Phila., Pa.
Hart, J. D. & Son, Barnharts Mills, Pa.
Hartigan, M. W., Omaha, Neb.
Hawkins, R. F., Iron Works, 19 Pearl st., Boston, Mass.
Haxtun Base Burning Boiler, 193 Lake st., Chicago, Ill.
Haxtun Steam Heater Co., Kewanee, Ill.
Haynes & Son, Salt Lake City, Utah Ter.
Hazelton Iron Works, Hazelton, Pa.
Heather, Henry, 462 11th av., N. Y.
Heilman, A., Allentown, Pa.
Hein Safety Boiler Co., 102 N. Main st., St. Louis, Mo.
Heipershausen Bros., 45 Tompkins st., N. Y.
Hendy, Joshua, Machine Works, 39 Tremont st., San Francisco, Cal.
Hennessy, J., Youngstown, O.
Hennessy, D., 127 W. Fayette st., Syracuse, N. Y.
Hepe, Koven & Co., 18 Spruce st., N. Y.
Herbert, M. E. & Co., St. Joseph, Mo.
Hess, Wm. J., Cheboygen, Mich.
Hetherington & Berner, Indianapolis, Ind.
Hewes & Phillips Iron Works, Orange, c. Ogden st., Newark, N. J.
Hibbs, E. A., 112 Broad st., Phila., Pa.
Hicks' Boiler Works, 444 S. Main st., Providence, R. I.
Hill & McDermott, 1906 N. 5th st., Phila., Pa.
Hinckley, Spiers & Hayes, 220 Fremont st., San Francisco., Cal.
Himes, J. & Co., Grand Rapids, Mich.

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Hoffman, P., 203 Greene st., Jersey City, N. J.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Holmes, J. H. & Co., Rutland, Vt.
Holt, Geo. F., 77 Haverhill st., Boston, Mass.
Holthoff, Chas., Hannibal, Mo.
Hooven, Owens, Rentschler Co. (The), Hamilton, Ohio.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Howard, James, 21st st. and Hunting Park av., Phila., Pa.
Howorth, D., Oskaloosa, Iowa.
Hoyt, J. E., Carthage, N. Y.
Hubbard, Norman, 934 Pearl st., Brooklyn, N. Y.
Hudson, H. H., Flint, Mich.
Huettman, F. & Co., 12 Sherman st., Detroit, Mich.
Heuston, Robert M., 55 Oliver st., Boston, Mass.
Huston, Perrin, Perrin & Co., 57 Oliver st., Boston, Mass.
Hussey, Re-Heater & Steam Plant Improvement Co., 15 Cortlandt st., N. Y.
Idell, F. E., 41 Dey st., N. Y.
Industrial Machine Works, Jacksonville, Fla.
Industrial Works, Bay City, Mich.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Instantaneous Water Heating Co., 125 Indiana st., Chicago, Ill.
Iowa Iron Works, Dubuque, Iowa.
Iron City Boiler Works, James Lappan & Co., Pittsburgh, Pa.
Jack, Andrew, Manistee, Mich.
Jarvis Engineering Co., 61 Oliver st., Boston, M.
Jochum & Jetter, 148 E. 50th st., N. Y.
Johnson Bros., Muskegon, Mich.
Johnson, C. J., Joplin, Mo.
Johnson, Warren P., Oskaloosa, Iowa.
Johnson, W. C., Fitchburg, Mass.
Johnston Bros., Ferrysburg, Mich.
Jones Bros., Streator, Ill.
Jones, Jos. C. & Sons., Emporia, Kan.
Jones, R. & Co., 133 E. Pearl st., Cincinnati, O.
Joplin Boiler Works, Joplin, Mo.
Joseph Mitchell Boiler Yard (The), 1219 W. Main st., Louisville, Ky.
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill.; 419 Walnut st., Phila., Pa.
Kalamazoo Steam Boiler Works, Kalamazoo, Mich.
Kane, C. F., Butler, Pa.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Keefer, Horace A. & Co., 54 Sheidley Bldg. Kansas City, Mo. 88.
Keeler, E. & Co., Williamsport, Pa.
Kelley, Benjamin F. 91 Liberty st., N. Y.
Kelley, E., Fall River, Mass.
Kelly, Dan'l, 51 N. 7th st., Phila., Pa.
Kelly, P., 225 Mill st., Rochester, N. Y.
Kelly, W. E., 36 Cortlandt st., N. Y.
Kendall, Edward & Sons, 72-92 Main st., Cambridgeport, Mass.
Kendall & Roberts, Cambridgeport, Mass.
Kenny Bros., St. Paul, Minn.
Keokuk Boiler Works, Keokuk, Iowa.
Kiell, Wm. B., Kansas City, Mo.
Killerlane & Ryder, 241 West st., N. Y.
Killilea, M., Tuft's wharf, E. Boston, Mass.
King Iron Works, 226 Ohio st., Brooklyn, N. Y.
Kingsford Foundry & Machine Works, Oswego, N. Y.
Koeschell Bros., 12 Michigan st., Chicago, Ill.
Knowles Steam Pump Works, 93 Liberty st., N.Y.
Kraft, G. W., 2132 Filbert st., Phila., Pa.
Kroeschell Bros., 4 Michigan st., Chicago, Ill.
Kuhn D. B., Norwalk, O.
Lake Erie Boiler Works, Buffalo, N. Y.
Lally & Russell, 1st & C sts, S. Boston, Mass.
Lambert Bros. & Co., Ironton, O.
Lanagan & O'Neil, 125 Conover st., Brooklyn, N. Y.
Landis, Ezra F., 537 N. Cherry st., Lancaster, Pa.
Lane & Bodley Co., 4 John st., Cincinnati, O.
Lappam, James & Co., 20th st., n. Penn av., Pittsburgh, Pa.
Lawrence Boiler Work, Lawrence, Mass,
Lawson Non-Explosive Boiler Co., 155 B'way, N. Y.
Lea, Robert, 1st av. & Ferry st., Pittsburgh, Pa.
Leas, Geo., Kansas City, Mo.
Leeds Forge Co. (Ltd), 41 Broadway, N. Y.
Leeds & Co., Delord, c. Constance st., New Orleans, La.
Leetonia Boiler Works Co., Leetonia, O.
Leffel, Jas. & Co., 110 Liberty st., N. Y.; Springfield, Ill.
Leslie, Hugh, 70-72 Pearl st., Jersey City, N. J.
Le Van W. Barnet, 3607 Baring st., Phila., Pa.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. 111.
Like, C. E. (Mrs. J. E.), Bay City, Mich.
Lintges, Connell & Co., Nicollet Is., Minneapolis Minn.
Litchfield Car and Machine Co., Litchfield, Ill.
Livingston, R., 15 Herkimer st., Albany, N. Y.
Lockyear, G. H., Minneapolis, Minn.
Logan Farrell & Son, Commercial, c. Clay st., Brooklyn, N. Y.
Lombard, Geo. R. & Co., Augusta, Ga.
Loring, H. E., 1st, n. M st., Boston, Mass.
Louisville Machine & Elevator Works, 717-733 E. Main st., Louisville, Ky.
Lounsbury, J. H., Westfield, Mass.
Love & Schofield, Port Huron, Mich.
Lovegrove & Co., 143 N. 3d st., Phila., Pa.
Lowe Mfg., Co., Norristown, Pa.
Lowell Steam Boiler Works, Lowell, Mass.
Ludington Boiler Works, Ludington, Mich.
Lunday, Chas. H., St. Louis, Mo.
Lyons, L. J. & Co., 191-195 Commerce st., Newark, N. J.
McAdam, W., Milton, n. West st., B'klyn, N.Y.
McAfee, W. & Son, 212 Spear st., San Francisco, Cal.
McAleenan & Co., Peoria, Ill.
McCabe, E. & Co., Lawrence, Mass.
McCarren Bros., Rockford, Ill.
McCormick, J. H., 53½ Water st., New London, Conn.
McCrary, A. S., Council Bluffs, Iowa.
McCurdy & Warden, 276 West st., N. Y.
McDaniel, C. E. & Co., Ottumwa, Iowa.
McDonnell, N. S. & Co., Des Moines, Iowa.
McElroy & Armitage, Keokuk, Iowa.
McFarland, John & Co., 905 S. Halstead st., Chic., Ill.
McGarry & Leonard, 36 E. Indiana st., Chicago, Ill.
McGill, Manchester & Co. (Ltd.), 2624 Smallman st., Pittsburgh, Pa.
McGowan Pump Co. (The), 141 W. 2d st., Cincinnati, O.
McGregor, Geo. L., 253 S. Clinton st., Chic., Ill.
McGregor, John & Sons, 181 Atwater st., Detroit, Mich.
McGregor, J. & Sons, Saginaw, Mich.
McGregor, M., Jackson, Mich.
McGregor, Thos., 3d & Congress sts., Detroit, Mich.
McGregor & Co., Duluth, Minn.
McGuffick, Wm., Stockton, Cal.
McIlvain & Spiegel, Pearl & Lawrence sts., Cincinnati, O.
McKay, H. Mfg. Co., Titusville, Pa.
McKeon, Wm., Vicksburg, Miss.
McKinnon, A., Red Wing, Minn.
McKinnon Mfg. Co., Bay City, Mich.
McLaren, J., Hoboken, N. J.
McLaughlin, Geo. G. Mfg. Co., 49 Haverhill st., Boston, Mass.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
McNeil, D. & Bro., 15 Imlay st., B'klyn, N. Y.
McNeil, J. C. & Co., Akron, O.
McNeil, J. & Bro., 29th, c. Railroad st., Pittsb'g, Pa.
McNeil, R. & J., Yonkers, N. Y.
McRae, D. W., Lockport, N. Y.
McTeague, Wm., St. Paul, Minn.
McWilliams & Brown, 12 Morris st., Jersey City, N. J.
McWilliams & Lawler, 93 Liberty st., N. Y.
Mahar John, bel. Central Depot, Tonawanda, N. Y.
Mahony, M., Liberty & 5th sts., Troy, N. Y.; 100 Walker st., N. Y.

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Maitland & Son, Peoria, Ill.
Mallory, W. S. & Co., 10 Randolph st., Chicago, Ill.
Manchester & Co., 28 N. Smallman, Pittsb'g, Pa.
Mangham, W., Yazoo City, Miss.
Mansfield Steam Boiler Works, Mansfield, O.
Marion, T. B., Lancaster, Pa.
Marshall, Wm., Dubuque, Iowa.
Mason Machine Works, Taunton, Mass.
Mathews, J., South Bend, Ind.
Mechanics' Boiler Works, Pottstown, Pa.
Mecklenburg Iron Co., Charlotte, N. C.
Melichar & Schindler, 21st, nr. Loomis st., Chicago, Ill.
Mercer, A., 137 Centre st., N. Y.
Merrell, J. E. & Bro., Jacksonville, Fla.
Merrill, V., 149 N. 3d st. Phila., Pa.
Middleport Boiler Works, J. P. Williams, Middleport, Ohio.
Middleton, W. S., 52 John st., N. Y.
Milburn Gin & Machine Co., Memphis, Tenn.
Miles, G., A st., c. Richards, South Boston, M.
Miller, C., Beaver Falls, Pa.
Miller Co. (The), Canton, O.
Millson, D., Catasaqua, Pa.
Minneapolis Boiler Works, Minneapolis, Minn.
Mitchell, J., 312-317, E. 11th st., Louisville, Ky.
Mitchell, T., 1713 W. Main st., Louisville, Ky.
Mittenger, August, Jr., 826-830 N. 4th st., Phila., Pa.
Mohr, John & Son, 32 Illinois st., Chicago, Ill.
Monks & Norton, Portland, Oregon.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Mooney & Markey, Grand Forks, Dak.
Moore, E. J., 49 N. 7th st., Phila., Pa.
Moore, James, N. 16th st., c. Buttonwood st., Phila., Pa.
Moore, John S., 169 Gravier st., New Orleans, La.
Morand, F., St. Paul, Minn.
Morgan, Geo. C., 149 La Salle st. (Room 15), Chicago, Ill.
Morgan Iron Works, 314 E. 9th st., N. Y.
Morris, I. P. & Co., 1057 Richmond st., Phila., Pa.
Morris Machine Works, Baldwinsville, N. Y.
Morris, Tasker & Co., 222-224 S. 3d st., Phila., Pa.
Mosely Safety Steam Boiler Co. (Ltd), Scranton, Pa.
Mt. Joy Steam Heating & Boiler Co., Mt. Joy, Pa.
Moynihan & Aitken, 311 Mission st., San Francisco, Cal.
Muldoon & Killerlane, 240 West st., N. Y.
Mullins, B. F., Holyoke, Mass.
Munroe, R. & Son., 23d and Smallman sts., Pittsburgh, Pa.
Munson Bros., Utica, N. Y.
Murphy, J. D., 158 Fulton st., Chicago, Ill.
Murphy, John C., 158 Fulton st., Chicago, Ill.
Murphy, T., Jacksonville, Fla.
Murphy, W., Alliance, O.
Murray, J. & Son, 102 York st., Balt., Md.
Myers, G. W., Steubenville, O.
Nagle, T. M., Erie, Pa.
Naguin & Gorman, Thibodeaux, La.
Nashua Steam Press & Boiler Works, Nashua, N. H.
National Boiler Works, 60 Fulton st., Chicago, Ill.
National Iron Works, New Brunswick, N. J.; 18 Cortlandt st., N. Y.
National Water Tube Boiler Co., 50 Oliver st., Boston, Mass.
National Water Tube Boiler Co., 18 Cortlandt st., N. Y.
National Water Tube Safety Boiler Co., 49 N. 7th st., Phila., Pa.
Naylor, Jacob, Girard av., c. Front st., Phila., Pa.
Neafie & Levy, Beach and Palmer sts., Phila., Pa. 26.
Nelson, C., 39 Evans st., Brooklyn, N. Y.
New Bedford Boiler Machine Co., 24 Front st., New Bedford, Mass.
New Britain Steam Boiler Works, ft. Seymour st., New Britain, Conn.
Newburg h Steam Boiler Works, Newb'h, N. Y.
Newell Universal Mill Co. (The), 10 Barclay st., N. Y.
New England Machine Works, 29-35 Cornhill, Boston, Mass.
Newsome, J. & Sons, Leavenworth, Kansas.
Newtown Boiler Works, Newton, Kansas.
N. Y. Central Iron Works, Geneva, N. Y.
N. Y. Safety Steam Boiler Co., 30 Cortlandt st., N. Y.
N. Y. Safety Steam Power Co., Hope Valley, R. I.
N. Y. Safety Steam Power Co., 64 S. Canal st., Chicago, Ill.
Nichols, David M., 2 Gouverneur st., N. Y.
Nichols & Langworthy, Hope Valley, R. I.
Niles Boiler Works, Niles, O.
North Star Iron Works, Minneapolis, Minn.
Northwestern Boiler Works, 64 Michigan av., Chicago, Ill.
North Wisconsin Boiler Works, Ashland, Wis.
Obert & Grove, Lebanon, Pa.
O'Brien, J., Salem, Mass.
O'Brien, John & Co., 1129-1137 N. Main st., St. Louis, Mo.
O'Brien, M. F. & Co., Pensacola, Fla.
O'Brien & Northley, Bradford, Pa.
O'Connor & Co., c. 3d and Congress sts., Detroit, Mich.
Ohio Machine Co., Middleport, O.
Ohmen, W. H., 109 Beale st., San Francisco, Cal.
Oil City Boiler Works, Oil City, Pa.
O'Rourke, E. & J., 213 S. Peters st., New Orleans, La.
Ottumwa Boiler Works, Ottumwa, Iowa.
Owen & Dwyer, Cedar Rapids, Iowa.
Owen & Son, Clinton, Iowa.
Pacific Iron Co,, Bridgeport, Conn.
Pacific Iron Works, San Francisco, Cal.
Packard, O. L., Milwaukee, Wis.
Palmer, E. E. & Son, Kansas City, Mo.
Palmer, N. F., Jr., & Co., 735 E. 11th st., N. Y.
Pancoast & Rogers, 28 Platt st., N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Parker James A., Meyersdale, Pa.
Paul, George K. & Co., 98 Milk st., Boston, Mass
Payne, B. W. & Son, 40 Dey st., N. Y.
Peleg, Wm. & Co., Evansville, Ind.
Penn Boiler Works, Norristown, Pa.
Penney & Kelly, Seattle st., Washington Ter.
Penobscot River Steam Boiler Works, Bangor, Me.
Perkins Machinery Co., Atlanta, Ga.
Petty, J. K. & Co., 206 N. 4th st., Phila., Pa.
Phelan & Co., Dallas, Tex.
Phœnix Boiler Works, 27 Indiana st., Buffalo, N. Y.
Phœnix Foundry Co., E. Water st., Syracuse, N. Y.
Phœnix Iron Co., Trenton, N. J.
Phœnix Iron Works (Ltd.), Meadville, Pa.
Pierce, Butler & Pierce Mfg. Co., 14-18 S. Clinton st., Syracuse, N. Y.
Pierce Steam Heating Co., Buffalo, N. Y.
Pierce & Thomas, 42 Cortlandt st., N. Y.
Pierson, J. C. & Co., Fond du Lac, Wis.
Pinkerton, R., Harlem, bel. D., Troy, N. Y.
Pitkin, Bros. & Co., 152 State st., Hartford, Conn.
Pittsburgh Locomotive & Car Works, Pittsb'g, Pa. 33.
Plummer, C. M. & H. T, Portland, Me.
Pollock, Alex., 212 West st., N. Y. 32.
Pollock, Wm. B. & Co., Youngstown, O.
Poole & Hunt, 7 German st., Balt., Md.
Portland Boiler Co., Sandusky, O.
Portland Company (The), 58 Fore st., Portland, Me.
Porter Mfg. Co., 37 S. Canal st., Chicago, Ill.
Porter Mfg. Co., 354 N. Salina st., Syracuse, N.Y.
Porter, Thompson & Co. (Ltd.), Darragh av., Allegheny, Pa.
Portsmouth Foundry and Machine Works, Portsmouth, O.
Pott, J. & Co., Lebanon, Pa.
Powell, A. C., & Son, Syracuse, N. Y.
Pratt, R. W., 131 Portland st., Boston, Mass.
Pratt, Stephen, Foundry & M. C. R. R., Detroit, Mich.
Pretorius & Lemmer, 141 First st., San Francisco, Cal.

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Prindable, D. H., 1234 N. Main st., St. Louis, Mo.
Providence Machinery Agency, 211 Eddy st., Providence, R. I.
Providence Steam Engine Co., 373 S. Main st., Providence, R. I.
Pussy & Jones Co., Wilmington, Del.
Putnam, R. S., Mendon, Mich.
Quinn & Co., 35 Commercial st., Portland, Me.
Racine Hardware Mfg. Co., Racine, Wis.
Ragau, W. H., Thebodeaux, La.
Ramsey, J. R., Pensacola, Fla.
Ramsey, R. W., 266 W. Main st., Louisville, Ky.
Rankin, Brayton & Co., 120 Fremont st., San Francisco, Cal.
Rankin Mfg. Co., 84 Irwin av., Allegheny, Pa.
Rawson & Morrison, 27-31 Main st., Cambridgeport, Mass.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Reagen, D. E., Indianapolis, Ind.
Reddy, M., Little Falls, N. Y,
Redman & Byram, Fishkill Landing, N. Y.
Reeder, C. & Son, 51 Hughes st., Balt., Md.
Rees, D. W. & Co., Canal Dover, O.
Rees, Jas. & Sons, 209 Penn ave., Pittsb'gh, Pa.
Rees & Thorn, Duquesne way & 1st st., Pittsburgh, Pa.
Reeves Bros. (Niles Boiler Works), Niles, O.
Reeves, James, Joplin, Mo.
Reilly, P. J., Aurora, Ill.
Rheam, S. B. & Co., 43d st. & A. V. R. R., Pittsburgh, Pa.
Rhode Island Locomotive Works, Providence, R. I.
Ricard Bros., Toledo, O.
Rice, H. W., 52 Bluxome st., San Francisco, Cal.
Rice, Whitaker & Co., 42 Monroe st., Chicago, Ill.
Richards, G. S., 1369 B'way, N. Y.
Richmond Locomotive & Machine Works, Richmond, Va. 12.
Rees & Thorn, Pittburgh, Pa.
Ritchie & Dyer Co., Hamilton, O.
Riter & Conley, 55 Water st., Pittsburgh, Pa.
Risdon Iron & Locomotive Works, Beale, c. Howard st., San Francisco, Cal.
Rix, E. A. & Co., 18 Fremont st., San Francisco, Cal.
Roberts, A., Springfield, O.
Roberts, T., Springfield, O.
Roberts, W. W., Wellsville, O.
Robinson Boiler Works, 5 New st., E. Boston, Mass.
Robinson & Burr, Champaign, Ill.
Rochester Machinery Mfg. Co, 34 W. Monroe st., Chicago, Ill.
Rogers Locomotive Works, Paterson, N. J,
Rohau Bros. Boiler Mfg. Co., 1100 Collins st., St. Louis, Mo.
Rowland, F. C. & A. E., New Haven, Conn.
Russell, H. S. & Co., Pittsfield, Mass.
Russell, James & Sons, W. 1st, c. C st., S. Boston, Mass.
Russell & Co., Mason, O.
Ruttan Mfg. Co., 68 Lake st., Chicago, Ill.
Sanderson, W. J., 21½ Church st., Syracuse, N. Y.
Salem Boiler Boiler Works, Salem, Mass.
Saxton, J. C., 52 B'way, N. Y.
Scannell & Wholey, Lowell, Mass.
Schillinger & Trumble, Moline, Ill.
Schneider, J. C., Winona, Kan.
Schneider, Nicholas, 15 Illinois st., Chicago, Ill.
Scott, J. & Co., 1605 N. Front st., Phila., Pa.
Shanks, A. L., Salem, O.
Sharon Boiler Works, Sharon, Pa.
Shapley & Wells, Binghamton, N. Y.
Shay & Berry, Milton, Pa.
Sheares & Hicks, Bradford, Pa.
Sheriff, J. B. Son & Co., 68 Water st., Pittsburgh, Pa.
Sheriffs, J., Milwaukee, Wis.
Sheriff & Ashworth, Pittsburgh, Pa.
Shevlin, P., 67 Church st., Albany, N. Y.
Shinn, J. K., 68 N. 3d st., Phila., Pa.
Shoenberger, Geo. K., 62 Michigan st., Chicago, Ill.
Shipman Engine Mfg. Co., Rochester, N. Y.
Shriver, Weatherly & Co., Grand Rapids, Mich.
Silsby Mfg. Co., Seneca Falls, N. Y.; 51 John st., N. Y.
Sim, J. D. & Co., Champney, n. Lowland, st, Boston, Mass.
Sinker, Davis & Co., Indianapolis, Ind.
Sintzenich, E. B., Rochester, N. Y.
Sioux City Foundry & Machine Works, Sioux City, Iowa.
Skinner & Arnold, 205 B'way, Albany, N. Y.
Skinner Engine Co., Erie, Pa.
Slater & Reid, 409 West st., N. Y.
Smith, Albert & Son, 481 11th av., N. Y.
Smith Bros., Jay, c. Plymouth st., Brooklyn, N. Y.
Smith, D., 86 Beverly st., Boston, Mass.
Smith, H. B. & Co. (The), New Haven, Conn.; 137 Centre st., N. Y.; 924 Market st., Phila., Pa.
Smith, J. J., Parkersburg, W. Va.
Smith, Myers & Schnier, 323 W. Front st., Cincinnati, O.
Smith, Samuel & Son, Paterson, N. J.
Smith, Theodore & Bro., ft. Essex st., Jersey City, N. J.
Smith, Wm. H., 115 Dearborn st., Chicago, Ill.
Smith & Barnhurst, Cortlandt st., N. Y.
Smith & Teachout, 644 B'way, Cleveland, O.
Snell, Henri I., 135 N. 3d st., Phila., Pa.
Solter Bros., Pottstown, Pa.
Somerworth Machine Co., Great Falls, N. H.
South Bend Boiler Works, South Bend, Ind.
Southern Boiler Works, Mobile, Ala.
Southerland, Thos. S. & Son, 481 River st., Troy, N. Y.
Southwark Foundry & Machine Co., Wash'n av. & 5th st., Phila., Pa.
Spangenburg, Pendleton & Co., Warren, O.
Sparks & Parker, Pottstown, Pa.
Spedden, R. M. & Co., 261 S. B'way, Balt., Md.
Spedden & McClymont, 915 S. B'way, Balt., Md.
Sperry & Co., 95 Liberty st., N. Y.
Spoup & Trodeau, Toledo, O.
Sprenger, J. & Sons, River Road, bet. Campau & Pleasant av., Detroit, Mich.
Springer, J. & Sons, Detroit, Mich.
Star Steam Heater Co., Market & Main sts., Mt. Joy, Pa.; 77 Maiden la., N. Y.
Stead Boiler Mfg. Co., 49 B'way, N. Y.
Stearns Mfg. Co., Erie, Pa.; 40 Cortlandt st., N. Y.; 23 Main st., San Francisco, Cal.
Steele, T., East Saginaw, Mich.
Steigert, L., Elder, c. Logan, Cincinnati, O.
Stewart Boiler Works, Union st., Worcester, Mass.
Stewart, Chas. & Son, Worcester, Mass.
Straight Line Engine, S. Geddes, N. Y.
Strecker, G. & Co., Harmar, O.
Struthers, Wells & Co., Warren, Pa.
Sullivan, D., Grand Rapids, Mich.
Sullivan, J. J., 46 S. Canal st., Chicago, Ill.
Sullivan & Ehlers, 166-174 B'way, Albany, N. Y.
Supplee, T. R., 149 N. 3d st., Phila., Pa.
Sutherland, T. S. & Son., Smiths av., Troy, N. Y.
Sutton Bros, 47 Le Contenlx st., Buffalo, N. Y.
Swampscott Machine Works, 98 Milk st., Boston, Mass.
Swampscott Machine, South New Market, N, H.
Sweeney, W. A. & Co., Jeffersonville, Ind.
Symmes & Donaldson, 10 James st., N. Y:
Syracuse Boiler & Sheet Iron Works, 129 E. Water st., Syracuse, N. Y.
Taber, B. & Son, Elston av., c. Wade st., Chicago, Ill.
Tanner & Delaney Engine Co., Richmond, Va. 12
Taylor, J., Gold Hill, Nevada.
Taylor & Son, Adams st,) B'klyn, N. Y.
Terrace Iron Works, 62 Terrace, Buffalo, N. Y.
Theall, Horace, 65 Bethune st., N. Y.
Thomas, J. E., Newark, O.
Thompson, Porter & Co. (Ltd), Darragh st., c. River av., Allegheny, Pa.
Tifft, Geo. W., Sons & Co., Buffalo, N. Y.
Tifft, G. W., Sons & Co., 13-35 Washington st., B'klyn, N. Y.
Tilton Bros., Boone, Iowa.
Tippett's, Robert, Son, Harrisburg, Pa.
Tippett & Wood, Phillipsburg, N. J.
Tobin, Hamler & Co., 875 S. Halsted st., Chicago.

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Tracy, H., Kansas City, Mo.
Trenton Machine Works, Trenton, N. J.
Trippett's, R., Sons, Harrisburg, Pa.
Troy Laundry Machinery Co. (Ltd.), 648-650 Fulton st., Troy, N. Y.
Tuckfield, T., Salt Lake City, Utah Ter.
Tudor Boiler Mfg. Co., 244 E. Pearl st., Cincinnati, O.
Turnbull Boiler Works Co., Muskegon, Mich.
Turnbull, Joseph, Minneapolis, Minn.
Turner & Rosser, Des Moines, Iowa.
Twiss, Nelson W., 25 Whitney av., New Haven, Conn.
Underhill, J. O., 224 E. 129th st., N. Y.
Union Boiler Works, Reading, Pa.
Union Cross Boiler Works, Stafford, n. Union st., Cleveland, O.
Union Iron Works, Trenton, N. J.
Union Iron Works, 216 Market st., San Francisco, Cal.
Union Steam Boiler Works, 42 Indiana st., Chicago, Ill.
Vandebogart, J. H., 62 River st., Troy, N. Y.
Van Dyke Mfg. Co., 60 Gr'point av., Brooklyn, N. Y.
Vanes, John, Brazil, Ind.
Van Sichlen, A. & Co., 15 S. Canal st., Chicago, Ill.
Vanzile, McCormack & Co., Broadway, c. Thacker st., Albany, N. Y.
Variety Iron Works Co., 51 Scranton av., Cleveland, O.
Velte & McDonald, Penn av., c. 32d st., Pittsb'g, Pa.
Vertical Tube Boiler Co., 2225 3d av., N. Y.
Vough, Henry Bros., Mfg. Co., 516 1st st., Brooklyn, E. D., N. Y.
Wainwright Mfg. Co. (The), 93 Liberty st., N. Y
Walker, Marvin H. & Co., 42 S. Canal st., Chicago, Ill.
Walsh, J. D., Duluth, Minn.
Walsh, S. S., 74 Quay st., Albany, N. Y.
Walworth Construction Co., 134 Congress st., Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Wangler, Joseph F., 1031 N. Main st., St. Louis, Mo.
Ward, J., Callio st., New Orleans, La.
Warden, H., Germantown Junction, Pa.
Waterbury Steam Boiler Works, Field st., bet. Naugatuck and N. Y. & N. E. R. R., Waterbury, Conn.
Waters, A. A., Paine, c. Hamilton st. (G. I.), Troy, N. Y.
Watertown Steam Blower Co., 35 Liberty st., N. Y.
Watertown Steam Engine Co., Watertown, N. Y.
Watkins, E., Barnharts Mills, Pa.
Watts, Campbell & Co., Newark, N. J.
Webb, Alfred & Co., Chattanooga, Tenn.
Webb & Watson, 17 Border st., East Boston, Mass.
Webster, Camp & Lane Machine Co., Akron, O.
Western Steam Boiler Works, 599 W. 22d st., Chicago, Ill.
Weston Boiler Co., 69 Liberty st., N. Y.
Weston Engine Co., Painted Post, N. Y.
Westwick, John & Son, Galena, Ill.
Wetherell, Robert & Co., Chester, Pa.
Wharton, Jos. S. L., Germantown, Pa.
Wheeler, J. E. & Co., Camden, N. J.
Whitehill, R., Newburgh, N. Y.
Whiting Mfg. Co., Cedar Rapids, Iowa.
Whittier Machine Co., 91 Liberty st., N. Y.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.
Wildman Bros., East Saginaw, Mich.
Wilfong Bros., 222 N. 23d st., Phila., Pa.
Wilkin Mfg. Co., Milwaukee, Wis.
Wilkinson, Frank M., Milwaukee, Wis.
Willard, Chas. P. & Co., 280-284 Michigan st., Chicago, Ill.
Willcox, Chas H., 2 Pryor st., Atlanta, Ga.
Williams, J. P., Middleport, O.
Wilson Boiler Co., 66 Cortlandt st., N. Y.
Wilson, J. M., Omaha, Neb.
Wilson, S. L., 258 N. Broad st., Phila., Pa.
Wilson & Hendrie, Montague, Mich.
Wisler, Jas. M., Locke, Ind.
Wood, J. Jr., Conshohocken, Pa.
Woodbury Engine Co., Rochester, N. Y.
Woolley, T., Gold Hill, Neb.
Worcester Boiler Works, 57 Green st., Worcester, Mass.
Wormer, G. S. & Son., 36 W. Monroe st., Chicago, Ill.
Wright, William, Newburgh, N. Y.
York, S. M., 44 South Water st., Cleveland, O.
Young L., Menominee, Mich.
Young & Locke, Titusville, Pa.
Young & Thomas, 42 Cortlandt st., N. Y.
Zeigler, M., 118 Van Horn st., Phila., Pa.
Zier, M. & Co., New Albany, Ind.

Boiler Tubes.

Chester Pipe & Tube Co., S. 4th st., Phila., Pa.
Eagle Tube Co., 614 W. 24th st., N. Y.
Morris, Tasker & Co., 224 S. 3d st., Phila., Pa.
Pancoast & Rogers, c. Gold and Platt sts., N. Y.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Syracuse Tube Co., Syracuse, N. Y.
Warner, A. B. & Son, 28 West st., N. Y.
Woltman, G., 5 N. 2d st., St. Louis, Mo.

Boiler Tube Cutter

Pedrick & Ayer, 1025 Hamilton st., Philadelphia, Pa. **60.**

Boiler Washing Apparatus.

Rue Mfg. Co., Philadelphia, Pa.

Boiler and Pipe Coverings.

Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. **iii.**
Acme Covering Works, 82 John st., N. Y.
Ainsworth Boiler & Pipe Covering Co., 112 S. Clark st. (Room 929), Chicago, Ill.
Ainsworth National Boiler & Pipe Covering Co., 25 Euclid av., Cleveland, O.
Ainsworth Boiler & Pipe Covering Co., Milwaukee, Wis.
American Steam Covering Co., 66 Cortlandt st., N. Y.
Asbestos Felting Works, 93 Maiden lane, N. Y.; 51 Cornhill, Boston, Mass.
Asbestos Packing Co. (The), 169 Congress st., Boston, Mass.; 33 John st., N. Y.
Asbestos Packing Co., 42 S. Canal st., Chic., Ill.
Barton, G. F., 24 N. 4th st., Phila., Pa.
Bell, T. J. & Co., 2d st. and Broadway, Cincinnati, O.
Budd, A., 528 Erie st., Cleveland, O.
Carey, P. & Co., 279 Broadway, Cincinnati, O.
Chalmers, Spence Co., 419-421 8th st., N. Y. **iv.**
Cincinnati Asbestos & Roofing Co. (The), 29 E. 3d st., Cincinnati, O.
Cincinnati Salamander Felting Co., 272 B'way, Cincinnati, O.
Cleveland Non-Conducting Co., 19 S. Water st., Cleveland, O.
Comer, T. J., 322 Chestnut st., St. Louis, Mo.
Connor, Thos. J., 714 N. Main st., St. Louis, Mo.
De Long & French, Concord & Madison aves., Allegheny, Pa; 128 Pearl st., N. Y.
Dempwolf, E. A., York, Pa.
Dryer & Lawrence, St. Louis, Mo.
Eureka Covering Co., Fitchburg, Mass.
Fire Proof Steam Covering Co., 142 E. Lake st., Chicago, Ill.
Flegle Air Space Covering Co., 34 Pacific av. (Room 11), Chicago, Ill.
Fossil Meal Co., 48 Cedar st., N. Y.
Fossil Meal Composition Co., 108 5th av., Chicago, Ill.
Gilmour, Robert M., 82 John st., N. Y.
Grier, E. Lindsay, 89 Water st., Pittsb'g, Pa.
Grier, M. C. & Co., Malden, Mass.
Goss, J. C., 16 Woodward av., Detroit, Mich.
Hanmore, J. W., 7 S. Delaware av., Phila., Pa.
Hayes, Edwin A., 262 West st., N. Y.
Hewlings, A. J., 108 5th av., Chicago, Ill.

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Houghton & Beall, 28 Woodward av., Detroit, Mich.
Howard, James, 21st st., & Hunting Park av., Phila., Pa.
Hunt & Clapp, 95 5th av., Pittsb'g, Pa. **72.**
Johns, H. W. Mfg. Co., 87 Maiden la., N. Y.; Chicago and Philadelphia.
Johnston A. & Co. (Ltd.), 1012 Penn av., Pittsb'g, Pa.
Kelly, Geo. & Co., 231 5th av., Chicago, Ill.
Kelly & Lockhart, 231 5th av., Chicago, Ill.
Kemper, Alfred C., 929 Chicago Opera House, Chicago, Ill.
Laing Mfg. Co., 1004-1012 Penn av., Pittsb'g, Pa.
Lowell Felting Mills, Lowell, Mass.
Magnesia Sectional Covering Co., 13 Cedar st., N. Y.; 9 N. 5th st., Phila, Pa.
Michigan Bolt & Nut Works., Wight st., above Marine Hospital, Detroit, Mich.
Michigan Pipe Co., Bay City, Mich.
Miller, C. W. & Co., Canal st., Phila, Pa.
McConnell, John A. & Co., 119 Water st., Pittsburgh, Pa.
Osborn, S. J., Jr., S. E. cor. 12th & Plum sts., Cincinnati, O.
Otley & Watkins, 95 Ashland Blk., Chicago, Ill.,
Nicolai, J. V., c. Water & Elm sts., Cincinnati, O.
Nightingale, S. C. & Childs, 184 Pearl st., Boston, Mass.
Penna. Mfg., Mining & Supply Co., 1400 Penn av., Pittsb'g, Pa.
Phillips Felting Works, Springfield, Mass.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Phoenix Felting Works, 17 E. 9th st., Cincinnati, Ohio.
Pine & Osborn, 41 Johnston Bldgs, Cincinnati, O.
Pittsburgh Pipe Covering & Belting Co. (Ltd.), 138 1st av., Pittsb'g, Pa.
Pittsburgh Supply Co., 105 Wood st., Pittsb'g, Pa.
Pollock, Alex., 212 West st., N. Y. **32.**
Rogers, W. H., Hartford, Conn.
Salamander Felting Co., 33 John st., N. Y.
Shields & Brown, 143 Worth st., N. Y.; 78 E. Lake st., Chicago, Ill.
Smith, J. S. & Co., 305 Plum st., Cincinnati, O.
Southern, W. M. & Co., 42 Merwin st., Cleveland, Ohio.
Star Steam Heater Co., Market & Main sts., Mt. Joy, Pa.; 77 Maiden la., N. Y. **57.**
Suhr, William, 96 John st., N. Y.
Thomas, R. & Co., 72 Water st., Boston, Mass.
Tidd & Johnson, 75 Merwin st., Cleveland, O.
Titcomb, A., 42 S. Canal st., Chicago, Ill.
Trainor, C. W. & Co., 148 Oliver st., Boston, Mass.
Uhthoff, R. D., 106 S. Gay st., Balt., Md.
U. S. Felt & Asbestos Mills, 262-263 West st., N. Y.
U. S. Mineral Wool Co., 173 B'way, N. Y.
Western Mineral Wool Co., 9 S. Water st., Cleveland, O.
Western Mineral Wool Co., Kansas City, Mo.
Western Mineral Wool Co., Milwaukee, Wis.
Western Mineral Wool Co., 66 Cortlandt st., N. Y.
Worcester, Francis, 108 5th av., Chicago, Ill.
Williams, Thomas, 337 Broome st., N. Y.
Wiseman, A., Paterson, N. J.

Boilers—Kerosene Burning.

Kane, Thos. & Co., 137 Wabash av., Chicago, Ill. **28 & 29.**

Boilers—Locomotive.

Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Dickson Mfg. Co., Scranton, Pa.
Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. **7.**
Lally & Russell, 1st & C sts., S. Boston, Mass.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Mason Machine Works, Taunton, Mass.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Pittsburgh Locomotive & Car Works, Pittsburgh, Pa. **62.**
Portland Co., Portland, Ore.
Turnbull Boiler Works, Worcester, Mass.

Boilers—Marine.

Amerman, Peter & Son, 108 Commerce st., Hartford, Conn.
Desner & Ritchie, ft. Aubin av., Detroit, Mich.
East End Boiler Works, ft, Aubin av., Detroit, Mich.
Fletcher Co., W. & A., 266 West st., N. Y.
Hodge, E. & Co., Liverpool st., n. Central sq., E. Boston, Mass.
Lake Erie Boiler Works, 244-254 Perry st, Buffalo, N. Y.
Lally & Russell, 1st and C sts., S. Boston, Mass.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
McGregor, John & Sons, 181 Atwater st., Detroit, Mich.
Neafie & Levy, Block and Palmer sts., Phila., Pa. **26.**
Pacific Iron Works, Bridgeport, Conn.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Portland Co., Portland, Me.
Providence Steam Engine Co., Providence, R. I.
Skinner & Arnold, 205 B'way, Albany, N. Y.
Turnbull Boiler Works Co., 201 Western av., Muskegon, Mich.

Boilers—Self Feeding.

Colliau, Victor, 287 Jefferson av., Detroit, Mich. **70.**

Boilers—Steam-Heating.

N. Y. Central Iron Works, Geneva, N. Y.

Bolts—Bridge.

American Bolt Co., 270 Lawrence st., Lowell, Mass.
Birmingham Bridge Co., Birmingham, Ala.
Michigan Bolt & Nut Works Detroit, Mich.
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
Tudor Iron Works, St. Louis, Mo.
Upson Nut Co. (The), Unionville, Conn.

Bolts—Copper and Brass.

Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.
Haskell, Wm. H. Co., Pawtucket, R. I.
Russell & Erwin Mfg. Co., 43 Chambers st., N. Y.
New Bedford Copper Co., New Bedford, Mass.
Van Wagoner & Williams Co., 82 Beekman st., N. Y.

Bolt Cutters.

Acme Machinery Co., Cleveland, C.
Boynton & Plummer, 52 Lagrange st., Worcester, Mass.
Brown, H. B. & Co., East Hampton, Conn,
Cleveland Twist Drill Co., 24 West st., Cleveland, Ohio. **24.**
Hill, Clark & Co., 156 Oliver st., Boston, Mass.
Howard Iron Works, Buffalo, N. Y.
Hurlbut Mfg. Co., Racine, Wis.
Hunt & Smith, Delaware, O.
National Machinery Co., Tiffin, O.
New Haven Mfg. Co., New Haven, Conn.
Manning, Maxwell & Moore, 111-113 Liberty st., N. Y.
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.; Hartford, Conn.
Riell Bros., Greenfield, Mass.
Sellers, Wm. & Co., 1600 Hamilton st., Phila., Pa.
Wiley & Russell Mfg. Co., Greenfield, Mass.

Bolts, Nuts and Washers.

Ætna Nut Co. (The), Southington, Conn.
Ajax Forge Co. (The) 5 Adams Express Bldg., Chicago Ill.
Allegheny, Monongahela & Birmingham Iron Works, Oliver Bros. & Phillips, Pittsb'gh, Pa.

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Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Allison Mfg. Co. (The) 32, c. Walnut st., Phila., Pa.
American Bolt Co., 270 Lawrence st., Lowell, Mass. 24.
American Bolt & Nut Works, 182 W. 2d st., Cincinnati, O.
American Screw Co., 21 Stevens st., Providence, R. I.
Ames, La Mott, Jersey Shore, Pa.
Avery Elevator Bucket Co., Cleveland, O.
Atwood Safety Nut Co., Springfield, Conn.
Bassett, D. M., Birmingham, Conn.
Belknap, W. B. & Co., 115 W. Main st., Louisville, Ky.
Berry Bros., Columbus, O.
Birmingham Bridge Co., Birmingham, Ala.
Blake & Johnson, Waterbury, Conn.
Boston Nut Co., 92-94 Broad st., Boston, Mass.
Bournes & Knowles Mfg. Co., Main, c. Elm st., Cleveland, O.
Boyle, Thos. G. & Co., 708 Penn av., Pittsburgh, Pa.
Buck & Co., M. M., 209 N. 3d st., St Louis, Mo.
Buffalo Nut and Bolt Co., (Ltd.), Chicago, c. Miami sts., Buffalo, N. Y.
Burton & Hoyt, San Francisco, Cal.
Bush Interlocking Bolt Co., 267 S. 4th st., Phila., Pa.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carey, Geo. H., No. 1 B'way, N. Y.
Central Bolt Works, 594 Walnut st., Cincinnati, Ohio.
Chapin Bolt & Nut Co., 175 Dearborn st., Chicago, Ill.
Charles, Wm. & Co., 16th bl. Pike st., Pittsburgh, Pa.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Chicago Nut Lock Co., 31 Dearborn st., Chicago, Ill.
Chicago Screw Co., 94 W. Washington st., Chicago, Ill.
Claffy, John, 48 Dey st., N. Y. 91.
Clark Bros. & Co., Southington, Conn.
Clarkson, John W., 28 Reade st., N. Y.
Cleary, Mary, 93 Elizabeth st., N. Y.
Cleveland Twist Drill Co., 24 West st., Cleveland, Ohio. 24.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbian Iron Co., 237 Lake st., Chicago, Ill.
Columbus Bolt Works, Columbus, O.
Colwell & Collins, Girard st, n. C. C. C. & I. R. R., Cleveland, O.
Crossetti, C., 142 Lincoln Mkt., Phila., Pa.
Cumberland Rolling Mill, Mount Clare, Balt. Md.
Dayton, L. M. & Co., 184 W. 2d st., Cincinnati, O.
Detroit Nut Lock Co., 114 Griswold st., Detroit, Mich.
Diamond State Iron Co., Wilmington, Del.
Dickson Mfg. Co., Scranton, Pa.
Dillon Nut Lock Co., 185 W. Pearl st., Cincinnati, Ohio.
Dilworth, Porter & Co. (Ltd.), Pittsburgh, Pa.
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
Doen, E., New Britain, Conn.
Donegan & Swift, 174 Fulton st., N. Y.
Drummond, M. J., Equitable Bldg., N. Y.
Ducreux, C., 95 Elizabeth st., N. Y.
Dwight, G., Jr., Springfield, Mass.
Eagle Bolt Works, 145 Columbia av., Phila., Pa.
Elba Iron & Bolt Co. (Ltd.), 606 Smithfield st., Pittsburgh, Pa.
Elden, W., 13 Sycamore st., Cincinnati, O.
Ewald Iron Co., St. Louis, Mo.,
Fox, H. L. & Co., St. Louis, Mo.,
Franklin-Moore Co. (The), Winsted, Conn.
Frost, L. D., Southington, Conn.
Fuller Bros & Co., 139 Greenwich st., N. Y.
Gaskell, Wm. & Son, 433 E. 25th st., N. Y.
Gaskell, Greenlie & Co., 499 Water st., N. Y.
Gautier Steel Dept. of Cambria Iron Co, Johnstown, Pa. 2.
Gillispie Bros. & Co., 218 R. R. Sts., Pittsburgh, Pa.
Gilmor, Wm., President & Fawn sts., Balt., Md.
Golcher Bros., Reading, Pa.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Hade, G., Allegheny, Pa.
Hall, L., Newmarket, N. H.
Hall's, S. Son, 231 W. 10th st., N. Y.
Hamilton Rivet Works, Hamilton, O.
Harrisburg Car Mfg. Co., Harrisburg, Pa. 7.
Hartford Machine Screw Co., Hartford, Conn.
Haskell, Wm. H. & Co., Pawtucket, R. I.
Haslett, F. M. & Co., Allegheny City, Pa.
Harvey Mfg. Co., 52 Wall st., N. Y.
Haydon, A. & M., 304 N. 22d st., Phila., Pa.
Head, Chas. B., 180 Grand av., Allegheny, Pa.
Hoopes & Townsend, 1330 Buttonwood st., Phila., Pa.
Hope, W. H. & Co., Lowell, Mass.
Hotchkiss, A. S. & Co., Wallingford, Conn.
Hotchkiss, G. C., Field & Co., 624 E. 14th st., N. Y.
Hotchkiss & Upson Co., C. C. C. & I. R. R. Track, Cleveland, O.
Hurlbut Mfg. Co., Racine, Wis.
Ives, H. B., New Haven, Conn.
Jersey City Spike & Bolt Works, Ames & Co., 312 Washington st, Jersey City, N. J.
Johnson, Walter & Co., Detroit, Mich.
Jones & Laughlins (Ltd.), 3d av., c. Try st., Pittsburgh, Pa.
Kansas City Bolt & Nut Works, Kansas City, Mo.
Kansas City Switch & Frog Co., Kansas City, Mo.
Keefer, Horace A. & Co., 54 Sheidley Bldg., Kansas City, Mo. 88.
Kensington Nut & Bolt Works, 723 Richmond st., Phila, Pa.
Knabb, A. Reading, Pa.
Knapp, J., Lowell, Mass.
Knickerbocker Co (The), Jackson, Mich.
Knoxville Car Wheel Co., Knoxville, Tenn.
Knoxville Iron Co., Knoxville, Tenn.
Laclede Rolling Mills, Chouteau, Harrison & Valle Iron Co., 204 N. 3d st., St. Louis, Mo.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, O.
Lake Erie Iron Co, 52 B'way, N. Y.
Lampson & Sessions Co., 605 Scranton av., Cleveland, O.
Lanz, M. & Sons, 2845 Carson st., Pittsb'g, Pa.
Larabee, J. W., Springfield, Mass.
Laramie Rolling Mills, ft. E. Scrymser st., Laramie City, W. T.
Litchfield Car & Machine Co., Litchfield, Ill.
Lord, C., 4006 Orchard st., Phila., Pa.
Lummis, H. P., 18 N. Delaware av., Phila., Pa.
Marland, Neely & Co., Ltd., ft. S. 22d st., Pittsburgh, Pa.
Martin, G. & Sons, 10th nr. Main st., Louisville, Ky.
Mason Iron Co., 2426 Washington av., Phila., Pa.
Marchessault, C., Minneapolis, Minn.
Meyer & Co., Auburn, N. Y.
Michigan Bolt & Nut Co., Detroit, Mich.
Miller, S. K. & Son, Easton, Pa.
Missouri Bolt & Nut Co., 211 Biddle st., St. Louis, Mo.
Moorhead Bro. & Co., Allegheny City, Pa.
Moran Bolt & Nut Co., Main, c. Florida st., St. Louis, Mo.
Mount Carmel Bolt Co., Mount Carmel, Conn.
McBain, Thomas A., 640 W. 38th st., N. Y.
McGookin, D. H. & Co., 1630 N. 9th st., Phila., Pa.
McMurtry, Geo. G., 22d & R. R. sts., Pitttsb'g, Pa.
Newark Nut Mfg. Co., 25 Prospect st., Newark, N. J.
Newhall, H. B. Co., 105 Chambers st., N. Y.
New Haven Nut Co., New Haven, Conn.
Norwich Bolt Works, Norwich, Conn.
O'Connor, M., 136 Sanford st., Brooklyn, N. Y.
Olsen, O. R., Indianapolis, Ind.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Parkes, Thos., 204 Chicago st., Buffalo, N. Y.
Parkhurst & Wilkinson, 142 Kinzie st., Chicago, Ill.
Pawtucket Mfg. Co., Pawtucket, R. I.
Payne Bros., 114 Mission st., San Francisco, Cal.
Peck, Stow & Wilcox Co., Southington, Conn.
Pennsylvania Bolt & Nut Co., Lebanon, Pa.

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Penn Iron Co. (Ltd.), Lancaster, Pa.
Phelps Mfg. Co., 17 Drumm st., San Francisco, Cal
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Pittsburgh Forge & Iron Co., 10th st., n. Penn av., Pittsburgh, Pa.
Pittsburgh Mfg. Co., 38th and R. R. sts., Pittsburgh, Pa.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Plumb, Burdict & Barnard, 637 Clinton st, Buffalo, N. Y.
Pollock, Alex., 212 West st., N. Y. **32.**
Port Chester Bolt & Nut Co. (The), Port Chester, N. Y.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Powers, J. T., 275 Madison st., Chicago, Ill.
Prindle, F. B., Southington, Conn.
Raymond Plumb & Co., Grand Rapids, Mich.
Reading Bolt & Nut Works, J. H. Sternbergh & Son. Reading, Pa.
Reynolds & Co., New Haven, Conn.
Rhode Island Tool Co., Providence, R. I.
Russell, Burdsall & Ward, 53 Dearborn st. (r. 11), Chicago, Ill., and Port Chester, N. Y.
Russell & Erwin Mfg. Co., 43 Chambers st., N.Y.; 19 N. 5th st., Phila., Pa.
Schellenberger Nut Lock Co., 515 Pine st., St. Louis, Mo.
Schuylkill Haven Iron Co., 120 B'way, N. Y.; Pottsville, Pa.
Security Bolt Co., 248 N. 8th st., Phila., Pa.
Shelton Co., Birmingham, Conn.
Shields, W., N. 23d, n. Race st., Phila., Pa.
Simpson & Jackson, 22d, c. Filbert st., Phila., Pa.
Skelly T., N. 24th, n. Callowhill st., Phila., Pa.
Smith, H. D. & Co., Plantsville, Conn.
Smith, S. C. & G. H., 204 B'way, Lowell, Mass.
Smith, T. & Co., Worcester, Mass.
South Tredegar Iron Co., Chattanooga, Tenn.
Stark Nut Lock, 110 N. 3d st., St. Louis, Mo
Standard Nut Co., 13 Sycamore st., Cincinnati, Ohio.
Standard Nut Co., ft S. 13th st., Pittsburgh, Pa.
Sternbergh, J. H., Reading, Pa.
Syracuse Bolt Co., Syracuse, N. Y.
Thornburgh & Glessner, 18-22 N. Clinton st., Chicago, Ill.
Thornton, W. F., Wilshire Bldg., Cleveland, O.
Todd-Donigan Iron Co. (The), 821 W. Main st., Louisville, Ky.
Toledo Bolt & Nut Co., Toledo, Ohio.
Townsend, Wilson & Hubbard, 2301 Cherry st., Phila., Pa.
Tredegar Iron Works, Richmond, Va.
Troy Steel & Iron Co., Troy, N. Y.; 26 B'way, N. Y.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.
Union Nut Co., 99 Chambers st., N. Y.
Upson Nut Co., Unionville, Conn.; Cleveland, O.; 332 E. Lake st., Chicago, Ill.
Urquhart, John S., 46 Cortlandt st., N. Y.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Vulcan Iron Co., Richmond, Va.
Wallace & Co., Wm. H., 131 Washington st., N. Y.
Walsh & Lea, 145 Columbia av., Phila., Pa.
Warner, G. F., Mfg. Co. (The), 212 East st., New Haven, Conn.
Wells Bros. & Co., Greenfield, Mass.
Western Iron Co., Rosedale, Kas.
Wilson, J. F., Worcester, Mass.
Winch's Rolling Mill, Spike and Bolt Works, Phila., Pa.
Winsted Norway Bolt Co., Winsted, Conn.

Boring Machinery—Car Wheel, Cylinder, &c.

Ames Mfg. Co., 33 Pemberton sq., Boston. **64.**
Betts Machine Co., Wilmington, Del.
Blaisdell, P. & Co., Worcester, Mass.
Farrel Foundry & Machine Co., Ansonia, Conn.
Flanders (L. B.) Machine Works, Phila., Pa.
Henley, M. C., Richmond, Ind.
Pedrick & Ayer, 1025 Hamilton st, Phila, Pa. **60.**

Bosh Plates.

Atlas Bronze Tuyere Co. (Ltd.), 2829 Smallman st., Pittsburgh, Pa.

Braces and Bits.

Am. Bit Brace Co., Buffalo, N. Y.
Amidon & Bastedo, Buffalo, N. Y.
Backus, Q. S., Winchendon, Mass.
Bartholomew, H. S., Bristol, Conn.
Currier, Albert E., Chesterfield, N. H.
Dickson, C. K., Sec'y Northern Central Ry. Co., St. Louis, Mo.
Fray, John S. & Co., Bridgeport, Conn.
Johnson Steel Rail Co. (The), Johnstown, Pa. **55.**
Miller's Falls Co., 93 Reade st., N. Y.
Reid, A. H., 1635 Barker st., Phila., Pa.
Saxton, E. R., Buffalo, N. Y.
Standard Tool Co., Bond, c. Rockwell sts., Cleveland, O.

Brads.

American Tack Co., Fairhaven, Mass.
American Tack Co., 116 Chambers st., N. Y.
Anthony & Cushman Tack Co., Taunton, Mass.
Boston Steel Nail & Tack Works, Boston, Mass.
Chicago Tack Co., Grand Crossing, Ill.
Elliott & Dobbie, Cleveland, O.
Evansville Mfg. Co., Evansville, Wis.
Jenkins, D. S., Brockton, Mass.
Sandwich Tack Co., Sandwich, Mass.
Simmons & Woodsum, E. Braintree, Mass.
Stanley Works, New Britain, Conn.
Walkley Hardware Co. (The), Plantsville, Conn.

Brakes—Automatic and Air.

American Brake Co., 160 B'way, N. Y.; St. Louis, Mo.
Beals Brake Co., 229 B'way, N. Y.
Capital City Machine Works, Spring & Water sts., Columbus, O.
Cline Patent Car Brake Co., 194 Washington st., Boston, Mass.
Eames Vacuum Brake Co., 123 Oliver st., Boston, Mass.; 115 B'way, N. Y.
Energy Mfg. Co., 1115 S 15th st., Phila., Pa. **57.**
Empey Car Brake Co., 11 Campau Bldg., Detroit, Mich.
Glines Patent Air Brake Co., Boston, Mass.
Tallman Automatic Car Brake Co., 171 B'way, N. Y.
Rote Automatic Brake Co. (The), Mansfield, O. **83.**
Stark Car Brake Co, Toledo, O.
Standard Mfg. Co., Fort Wayne, Ind.
Ward Axle, Brake & Coupling Co., Monongahela, City, Pa.
Ward Axle, Brake & Coupling Co., Pittsb'g, Pa.
Westinghouse Air Brake Co., Pittsb'g, Pa. **1x.**
Whitner Automatic Safety Brake Co., 96 B'way, N. Y.

Brakes—Automatic Freight Car.

Eames Vacuum Freight Brake Co., 123 Oliver st., Boston, Mass.
Stark Car Brake Co. (The), Toledo, O.
Westinghouse Air Brake Co., Pittsb'g, Pa. **1x.**

Brakes—Electric (by Storage Battery).

Electrical Accumulator Co. (The), 44 B'way, N.Y.

Brake Shoes.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Baltimore Car Wheel Co., Fulton Junction, Balt., Md.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Brill, J. G., Co., Phila., Pa.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Congdon Brake Shoe Co., c. Dearborn & Monroe sts., Chicago, Ill.

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Columbus Iron Works Co., Columbus, Ga.
Dederick, Z. P., Sherman, Texas.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, 202 Merwin st., Cleveland, O.
Greeley, The E. S. & Co., 5-7 Dey st., N. Y.
Griffin, Thos. F. & Son, Buffalo, N. Y.
Howard, Childs & Co., Hamilton Bldg., Phila., Pa.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lappin Brake Shoe Co, 239 B'way, N. Y.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Pugh & Russell, Stewart Bldg., N. Y.; Phœnix Bldg., Chicago, Ill.
Ramapo Wheel & Foundry Co., Ramapo, N. Y.; 115 B'way, N. Y.; Hillburn, N. Y.
St. Thomas Car Wheel Co., St. Thomas, Ont.
Sharon Steel Castings Co., Sharon, Pa.
Smith, Oliver A., Clarkson, Mich.
Solid Steel Co. (The), Alliance, O.
Stephenson, John, Co. (Ltd), 47 E. 27th st., N. Y., Phœnix Bldg., Chicago, Ill.
Street Ry. Supply Co., Cleveland, O.
Vulcanized Fibre Co., Wilmington, Del.; N. Y. office, 14 Dey st 96.
Whitney, A. & Sons, Phila., Pa.
Whiting Mfg. Co., Cedar Rapids, Iowa.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. & Washington av., Phila. Pa.

Brakes—Street Car, Handles, &c.

Andrews, Frank H., 545 W. 33d st., N. Y.
Brill, J. G., Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Dederick, Z. P., Sherman, Texas.
Greeley (The) E. S. & Co., 5-7 Dey st., N. Y.
Howard Childs & Co., Hamilton Bldg., Pittsb'g, Pa.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin Rufus & Co., 114 Nassau st., N. Y. 52.
Pugh & Russell, Stewart Bldg., N. Y.; Phœnix Bldg., Chicago, Ill.
Roebling's Sons & Co., John A., 117 Liberty st., N. Y. 8.
Stephenson, John Co. (Ltd.), 47 E 27th st., N. Y.; Phœnix Bldg., Chicago, Ill.
Willson, Mordecai M. (Agent), Troy, N. Y.

Braiding Machinery for Electric Wires.

New England Butt Co., Providence, R. I.

Brass Finishers and Founders.

Acme Iron Works, St. Johnsbury, Vt.
Ætna Brass Works, 450 Lime st., Cincinnati, O.
Adams, E. A., Binghamton, N. Y.
Adams & Stearns, 31 S. Canal st., Chicago, Ill.
Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Ajax Metal Co., 2040 N. 10th st., Phila., Pa.
Allamby, G. T., Bangor, Me.
Allen, C. H., Toledo, O.
Allen Fire Department Supply Co., Eddy, c. Friendship sts., Providence, R. I.
American Bronze Works, 46-48 Columbus, Cleveland, O.
American Tool & Machine Co., 84 Kingston st., Boston, Mass.
American Tube Works of Boston, 400 Locust st., Phila., Pa.
Anderson, J. D., 20 Centre st., Cleveland, O.
Anderson, M. S., 130 W. Lake st., Chicago, Ill.
Anderson, Stephen, 33 Hawkins st., Boston, Mass.
Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Atlantic Works, 76 Border st., E. Boston, Mass.
Atwood, W. J. & Co., Amesbury, Mass.
Atwood & McCaffrey, 60 3d av., Pittsb'g, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Bailey Mfg. Co., Owosso, Mich.
Bailey, Wm. F. & Co., St. Paul, Minn.
Bainbridge, Wm., 332 Gates av., B'klyn, N. Y.
Baker Bros., Plainville, Conn.
Baltimore Steel Metal Works, Balt., Md.
Band, F., 522 Fulton st., San Francisco, Cal.
Barbour & Mulhall, 802 E st., Washington, D. C.
Bard, G. F., Norwich, Conn.
Barnett, A., 85 5th av., Chicago, Ill.
Barnett, W., Mansfield, O.
Bartholomew, J. D., Allentown, Pa.
Bassille, L., 71 Sudbury st., Boston, Mass.
Baner, W. B., 463 Dillwyn st., Phila., Pa
Beck, N. W., Wheeling, W. Virginia.
Begley & Healey, Evansville, Ind.
The Belknap Mfg. Co., 99 Water st., Bridgeport, Conn.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Benedict & Burnham Mfg. Co., Waterbury, Ct.
Bennett, Joseph D., 41 Sackett st., Brooklyn, N. Y.
Bennett Mfg. Co. (The), 46 S. Canal st., Chicago, Ill
Benson, W., Moline, Ill
Best, Fox & Co., 1st av., c. Ferry st., Pittsburgh, Pa.
Bevin Bros. Mfg. Co., East Hampton, Conn.
Birkery, C., 33 Wells st., Hartford, Conn.
Birmingham Iron Foundry, Birmingham, Conn.
Blake, Thomas J., 38 Ferry st., Hartford, Conn.
Blake, Wm. & Co., Brighton, c. Allen st., Boston, Mass.
Blakeman, F. R., 20 Dunham pl., Brooklyn, N. Y.
Blemly, W. I., 174 Centre st., N. Y.
Bloemaker, H., 14 Clark av., St. Louis, Mo.
Blum, Schoettle, Collinsville, Ill.
Blundell, H. & Co., 37 Clifford st., Providence, R. I.
Boettcher, J. G. L., 180 Kent av., Brooklyn, N. Y.
Bond, G. W., Biddeford, Me.
Booth, W., B'way, c. Cornelia st., B'klyn, N. Y.
Booth & Brabson, 9-13 Adams st., B'klyn, N. Y.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Bourbon Copper & Brass Works, 196 E. Front st., Cincinnati, O.
Bowie, J., 112 Front st., Brooklyn, N. Y.
Bowman, J. K., 934 Race st., Phila., Pa.
Boyd, R., 520 Tenth av., N. Y.
Bradford, J., 721 E. York st., Phila., Pa.
Bradley, R., Minneapolis, Minn.
Bradley & Hubbard, Meriden, Conn.
Brennan, P., 291 S. Canal st., Chicago, Ill.
Bridgeport Brass Co., 19 Murray st. N. Y.
Bridgeport Brass Co., 2 Willard, st., Bridgeport, Conn.
Bristol Brass & Clock Co., Forestville, Conn.
Broderick, P. J., 210 E. 54th st., N. Y.
Brodie & Campbell, 90 Plymouth st., Brooklyn, N. Y.
Brower, H. C. & Son, 79 E. Genesee st., Syracuse, N. Y.
Brown, A. H., 16 Elk st., Buffalo, N. Y.
Brown, T. H., 28 Summer av., Newark, N. J.
Brown, W. H., 4517 N. 2d st., St. Louis, Mo.
Bruneman, Adolph, 155 Perry st., N. Y.
Bucholz, Henry A., 32 Bond st., N. Y.
Buckeye Bell & Brass Foundry, 104 E. 2d st., Cincinnati, O.
Buckeye Iron & Brass Works, Dayton, O.
Buick & Sherwood, Lafayette st., c. Meldrum av., Detroit, Mich.
Bureau Bros., 811-813 Fairmount av., Phila., Pa.
Burnham & Willis, Brattleboro, Vt.
Bush, W. R. (fdr.), Fall River, Mass.
Byrom, J. (fdr.), Lawrence, Mass.
Cadman, A. W. & Co., 63 Water st., Pittsburgh, Pa.
Cairns, J., 909 N. 9th st., Phila., Pa.
Campbell, Gardner & Son, 242 Oregon st., Milwaukee, Wis.
Campbell & Bros., 31 Post-office av., Balt., Md.
Carbec, M. & Co., 87 Border st., Boston, Mass.
Carbon Bronze Co., 38 Water st., Pittsb'g, Pa.
Carr, F. (fdr.), Wareham, Mass.
Carr, J. S. & Co. (finishers), Springfield, Mass.
Carter, Burwell, Plainville, Conn.
Carter, Edward & Son, Ansonia, Conn.
Carty, J. A., Blackstone, N. Eddy st., Providence, R. I.

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Caskey, H., Beach, c. Norris st., Phila., Pa.
Central Brass Foundry, 25 Chaplain st., Cleveland, O.
Central Brass Works, 20 Perry st., Cincinnati, Ohio.
Central Union Brass Co., 811 N. 2d st., St. Louis, Mo.
Chaize, L., San Jose, Cal.
Chamberlain, O. P., 12 Spruce st., St. Louis, Mo.
Chambers & Ainslee, 1 Commercial st., Newark, N. J.
Chapin, J., 219 Summer st., Worcester, Mass.
Chapin, M. (Finisher), Springfield, Mass.
Cheetham, G., 105 Jackson st., Sandusky, O.
Cincinnati Brass Work, 15-17 E. 8th st., Cincinnati, O.
Clark, J. C., Middle Haddam, Conn.
Clark, L. P. & Sons, 206 N. Holliday st., Balt., Md.
Clark, Minford S., 124 Baxter st., N. Y.
Clark, R. S. & Co., Mt. Carmel, Conn.
Clark, W. P., 51 Chardon st., Boston, Mass.
Claudat, Frank, 117 Macdougal st., N. Y.
Cleveland Faucet Co, 18 Frankford st., Cleveland, O.
Clifford & Son, 58 Freeman st., B'klyn, N. Y.
Clum, P. A., 5 Platt st., Rochester, N. Y.
Coleman, J. B., 29 Platt st. Rochester, N. Y.
Collignon, Grimard, Perry, c. Washington sts., Buffalo, N. Y.
Collins, T. E., Columbus, O.
Columbus Brass & Steam Pipe Works Co. (The), 240-242 N. High st., Columbus, O.
Columbus Machine Co., Columbus, O.
Cooper, Jones & Cadbury, 1134 Ridge av., Phila., Pa.
Cory, C & Son, 278 Divison st., N. Y.
Cornall, R., 11 N. Frederick st., Balt. Md.
Cowles, J. C., 203 N. Water st., Rochester, N. Y.
Cox, J., 63 Beaver st, Albany, N. Y.
Coyne & Delany, 24 Frost st., B'klyn, N.Y.
Craigie, A. (fdr.), New Bedford, Mass.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Crockett, D., Portland, Me.
Cummer & Henderson, Cadillac, Mich.
Curley, W., 76 Border st., Boston, Mass.
Curley, W. & L. E., 514 Fulton st., opp. Union Depot, Troy, N. Y.
Currier, C. & Sons, 21 R. R. pl., Newark, N. J.
Cusick, E. J., 31 Wells st., Hartford, Conn.
Daley, O., 23 St. Clair, Cleveland, O.
Damascus Bronze Co., Duquesne Way, Pittsb'g, Pa.
Dame & Townsend Co., 76 John st., N. Y.
Darling, M. V. B., 32 Elm st, Providence, R. I.
Daval, John & Sons, 100 John st., N. Y.
Dawson Bros., 173 S. Clinton st., Chicago, Ill.
Day, J. H., 34 W. 5th st., Cincinnati, O.
Dayton Gauge Co, Dayton, O.
Dayton Mfg. Co. (The), Dayton, O.
Deck Bros., 20 Indiana st., Buffalo, N. Y.
Deckebach, F. C, 165 W. Court st., Cincinnati, O.
Delamater, C. H. & Co., ft. W. 13th st., N. Y.
Dent, W. & Son, Utica, N. Y.
Denton, J. A., Lowell, Mass.
Deoxidized Metal Co., Railroad, c. West avs., Bridgeport, Conn.
D'Este & Co., 59 Beverly st., Boston, Mass.
Detroit Copper & Brass Rolling Mills, 4th, c. Larned st., Detroit, Mich.
Detroit Lubricator Co., Rivard, c. Atwater st., Detroit, Mich.
Devlin, Frank, 95 N. J. R. R. av., Newark, N. J.
Dexter Mfg. Co., Des Moines, Iowa.
Dietz, A. E., 20 Dunham pl., Brooklyn, N. Y.
Docker & Holton, 36 Chardon st., Boston, Mass.
Dockray, C., Zanesville, O.
Donohue, M., 117 Walker st., N. Y.
Donegan & Reilly, 229 West st., N. Y.
Donovan, Patrick, 125 Railroad av., n. Warren st., Bridgeport, Conn.
Dougherty, Wm., 575 S. 20th st., Phila., Pa.
Douglass, W. H, 1212 D st., Washington, D. C.
Douglass & Conrad, Reading, Pa.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Duncan, J., Fort Howard, Wis.
Duncan, W., Somerville, Mass.
Dunn, P, J. & Co., 218 W. 2d st., Cincinnati, O.
Du Plaine, E. A. C., 66 S. Canal st., Chicago, Ill.
Duquesne Brass Works & Foundry, 63 Water st., Pittsburgh, Pa.
Eagle Brass Foundry, Washington, c. Perry st., Buffalo, N. Y.
Eagle Brass Works, 118-122 9th st., Louisville, Ky.
Eagle Foundry & Brass Works, Fort Howard, Wis.
Eagle Iron Works, Oshkosh st., Milwaukee, Wis.
East Hampton Bell Co., East Hampton, Conn.
Eastwood, Benjamin, Paterson, N. J.
Eaton, Cole & Burnham Co. (The), 69 Water st., Bridgeport, Conn.
Eckardt, H. G., 14 Lorimer st., B'klyn, N. Y.
Edson Mfg. Co., 182 Commercial st., Boston, M.
Edwards & Haubtman, 22-32 S. Front st., New Orleans, La.
Emory, P. P. & Co. Founders, 48 Hampden st., Springfield, Mass.
Enos, Hill & Co., Gallipolis, O.
Enterprise Bronze Co., 10 Fetter's la., Phila., Pa.
Epping, Carpenter & Co. (Ltd.), 2410-2420 Penn av., Pittsburgh, Pa.
Erie City Brass Works, (Ltd.), Erie, Pa.
Eureka Brass Foundry, Minneapolis, Minn.
Evans, S. W. & Son, 4719 Paul st., Phila., Pa.
Everhart, J. M., Scranton, Pa.
Excelsior Nickel Plating Works, 223 Richmond st., Providence, R. I.
Fahy, J. J., 2631 Filbert st., Phila., Pa.
Farmer, T. Jr., & Co., Grand Rapids, Mich.
Farman's Brass Works, 23 Centre st., Cleveland, Ohio.
Farnham, M. H., Dover, N. H.
Farrel Foundry & Machine Co., Ansonia, Conn.
Farrell, T., 358 N. 2d st., Brooklyn, N. Y.
Fawcett, J. J., Springfield, O.
Fewlass, Geo., 118 E. 2d st, Cincinnati, O.
Fifield, G. E., South New Market, N. H.
Fifield, G. W., Finisher, Lowell, Mass.
Fitzsimmons, J., 23 Carson st., Pittsburgh, Pa.
Fleet, I O., head Carleton Wharf, East Boston, Mass.
Flower, J. & Bros., Woodbridge, c. Brush st., Detroit, Mich.
Fodell, W., 2227 Wood st., Phila., Pa.
Fogg, J. A. (fdr.), Lawrence, Mass.
Folsom, E. & Co., Exeter, N. H.
Ford, H. C., 14 Lorimer st., Brooklyn, N. Y.
Forest City Brass Works, 25 Fall st., Cleveland, Ohio.
Foster, Wm. T. & Co., Boston, Mass.
Foundry Machine Works, Lee, Mass.
Fox, Benjamin, 515 W. 34th st., N. Y.
Francis, Thos., 67 Vestry st., N. Y.
Frick, G. L., 614 N. 3d st., Phila., Pa.
Fries, L. P. & Son, 808 S. 2d st., St. Louis, Mo.
Frontier Iron & Brass Works, Cherry, c. Atwater sts., Detroit, Mich.
Fruenhinsfeld, J., 97 Broome st., Newark, N. J.
Fuller, A. F., 54 Friendship st., Fond du Lac, Wis.
Fuller, F., 438 S. Main st., Providence, R. I.
Fullerton, J., 438 E. Girard av., Phila., Pa.
Fullerton, J., 175 Kent av., B'klyn, N. Y.
Fullmer, A. J. & Co., Camden, N. J.
Fulton's, A. Son & Co., 91 1st av., Pittsb'g, Pa.
Gaertner, X., 508 S. 2d st., St. Louis Mo.
Gallagher, James, 87 Centre st., N. Y.
Gallison, F. L. (fdr.), Lowell, Mass.
Galvin Brass & Iron Works, Warren av., c. 15th st., Detroit, Mich.
Gannon, Thos., 66 Hudson st., Jersey City, N. J.
Gardner, J. B & Son, Ansonia, Conn.
Gardner & Southwick, New Bedford, Mass.
Garratt, J. W. & Co., 2028 Walnut st., St. Louis, Mo.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Gerwein, W., 7 S. Jefferson st., Chicago, Ill.
Gibbons & King, New Britain, Conn.
Gibson & Kirk, 40 Cheapside st., Balt. Md.
Gilchrist, J. (finisher), Lowell, Mass.
Ginther, J., 417-427 Washington st., Buffalo, N.Y.
Giovannini & Co., 105 Tremont st., San Francisco, Cal.
Gisriel, W., 316 N. Holiday st., Balt., Md.

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Gleeson, M. T., Columbus, O.
Globe Brass & Bell Foundry, 137 Beale st., San Francisco, Cal.
Goetzel, Emil, 50 Wash'n sq. S., N. Y.
Gong Bell Mfg. Co., East Hampton, Conn.
Goodenough, L., Bristol, Conn.
Gordon, A. D., Chester, Pa.
Gory, W. M. & Co., Willimantic, Conn.
Gould & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Gould & Harrison, Rochester, N. H.
Graf, J., 886 Park av., Brooklyn, N. Y.
Graham, Jas. & Co., 293 Wooster st., New Haven, Conn.
Graham & Johnson, 162 S. Clinton st., Chicago, Ill.
Granular Metal Co., 166 Ruggles st., Boston, Mass.
Graves & Ginney (fdrs.), Holyoke, Mass.
Gray, Shook & Co., 5 2d av., Pittsb'g, Pa.
Gregg, L., 12 Spruce st., St. Louis, Mo.
Gregg, L. A., 217 Clark av., St. Louis, Mo.
Gregory, James, 106 Cannon st., N. Y.
Green, Wm. H., 34 S. 2d st., Phila., Pa.
Greenberg's, M. Sons, 205 Fremont st., San Francisco, Cal.
Greene, G. W. & B. F & Co., 41, c. A. V. R. R., Pittsb'g, Pa.
Fries & Co., 508 Washington st., Buffalo N. Y.
Groat, Shaw & Co., 48 S. West st., Syracuse, N. Y.
Grundy, J. & Co., 50 Sudbury st., Boston, Mass.
Haight, Robert, 511 W. Market st., Louisville, Ky.
Haines, Jones & Cadbury, 1136 Ridge av., Phila., Pa.
Halstead & Spencer, 1129 Cherry st., Phila., Pa.
Hamilton, J., 138 Middle st., Bridgeport, Conn.
Hammond & Co., Geneseo, Ill.
Hardoin, N. & Co., Brush, c. Lafayette st., Detroit, Mich.
Hardwick & Ware, 294 Washington st., Buffalo, N. Y.
Hardy, W. A. (fdr.), Fitchburg, Mass.
Harmar Foundry & Machine Co., Marietta, O.
Harpke & Dauernheim, 313 N. 3d st., St. Louis, Mo.
Harris Brass & Bronze Co., 107 W. Monroe st., Chicago, Ill.
Harris, G. P. & Bro., 62-64 W. Lake st., Chicago, Ill.
Harris R., Orleans, nr. Marginal st., Boston, Mass.
Harris & Shearer, 107 S. Liberty st., Balt., Md.
Hartmann Bros., 9 W. 7th st., Cincinnati, O.
Harvey, A. & Son, 139-149 Woodbridge W. st., Detroit, Mich.
Hathorn, J. K., Richmond, Me.
Havell, G., 284 Washington st., Newark, N. J.
Hayden Co. (brass goods), Haydenville st., Williamsburgh, Mass.
Hayden, J., Brass Co., Lorain, O.
Head's Iron Foundry, Utica, N. Y.
Hedges & Bro., 23 N. J. R. R. av., Newark, N. J.
Hendrickson & Clamer, 2046 N. 10th sts., Phila., Pa.
Hesterberg, R. & Co., Pearl, c. Plum st., Cincinnati, O.
Hewitt Mfg. Co., 185 Dearborn st., Chicago, Ill.
Hewison, C. W., 179 Christopher st., N. Y.
Higgs, M. A., Sharon, Pa.
Hildreth, E. (finisher), Lawrence, Mass.
Hill, A. M., 573 Dixwell av., New Haven, Conn.
Hill, Rowland, 157 Border st., E. Boston, Mass.
Hindermeyer, J. & Son, 911 Vine st, Phila., Pa.
Hirshheimer, M., La Crosse, Wis.
Hobart, C. P., Southington, Conn.
Hofer, J., 377 B'way, B'klyn, N. Y.
Holland, W., 46 S. Canal st., Chicago, Ill.
Holland & Thompson, 217 River st., Troy, N. Y.
Hollings, R. & Co., 547 Washington st., Boston, Mass.
Holmes, Booth & Haydens, 25 Park pl., N. Y.
Holmes, Booth & Haydens, 506 Commerce st., Phila., Pa.
Holz, B., 87 Maple st., Buffalo, N. Y.
Homer & Poole, 231 Race st., Phila, Pa.
Hooks Smelting Co., Broad, c. Hamilton st., Phila., Pa.
Hope Brass Furnishing Works, 7 Eddy st., Providence, R. I.
Hopkins, A. & Co., 48 Exchange pl., Providence, R. I.
Horning, J., 141 Stockholm st., Brooklyn, N. Y.
Horrocks, M., Menominee, Mich.
Hourigan, P. J. & N. J., 11½ James st., N. Y.
Howard, J. P., 13 Bowker st., Boston, Mass.
Humason & Beckley Mfg. Co., New Britain, Conn.
Hunt, H., 69 Haverhill st., Boston, Mass.
Hutaf, J. H., 94½ High st., Brooklyn, N. Y.
Hyde, Kline & Co., Ridgway, Pa.
Ingols, J. P. & Co., 113 A st., Boston, Mass.
Ill. John, r. 201 Wooster st., N. Y.
Illinois Street Gas Co., 195 Michigan st., Chicago, Ill.
Jacobus & McCarthy, 56 Elm st., Newark, N. J.
Jarecki Mfg. Co., Erie, Pa.
Jersey City Smelting Works, 107 Plymouth st., Jersey City, N. J.
Johnson, H. F., 1 Desbrosses st., N. Y.
Johnson, J. A., 38 Potter st., Providence, R. I.
Jost, E., 320 Market st., Newark, N. J.
Jumper, C. H., Lewiston, Me.
Kalbitz, F., Fond du Lac, Wis.
Kattentidt, C., 113-119 Michigan st., Chicago, Ill.
Kauffman, G. & Co., Leavenworth, Kan.
Kay & Co., 132 Water st, Louisville, Ky.
Keener, J. H., 1606 Thames st., Balt., Md.
Keiser & Wundes, 288 State st., Rochester, N. Y.
Kellam H., 44 2d st., Detroit, Mich.
Kemp Bros., 324 North st., Balt., Md.
Kemp, W., 27-29 N. 3d st., Troy, N. Y.
Kempshall Mfg. Co., New Britain, Conn.
Kennedy, J. H., 713 7th av., N. Y.
Keys W. W., Aliceanna, c. Spring st., Balt., Md.
Keystone Brass Co., 12 W. 11th st., Erie, Pa.
Keystone Smelting Co., 33d st., c. A. V. R. R., Pittsburgh, Pa.
Kinnear, Peter, 66 Beaver st., Albany, N. Y.
Kinsey, N. B., Saginaw, Mich.
Kinsey, Mahler Co., Peoria, Ill.
Kinzer & Jones, 101-111 Penn av., Pittsb'gh, Pa.
Kirk Bros., 118 Canal st., Phila., Pa.
Kirk, W. W., 406 E. Pratt st., Balt., Md.
Kirkup, Jno. & Co., 524 Centre st., Louisville, Ky.
Kirkup, Robert & Co., Lodge, c. Gano st., Cincinnati, O.
Kirkup, W. & Son, Pearl, c. Ludlow st., Cincinnati, O.
Kleb, George, r. 143 Thompson st., N. Y.
Knapp Mfg. Co., 22 Frankfort st., N. Y.
Knight, G. W., 141 Master st., Phila., Pa.
Knowles, E., 45 S. 5th st., Brooklyn, N. Y.
Knowlton Bros., Camden, Maine.
Koch, W. A., 126 Clybourn st., Milwaukee, Wis.
Kopf, J., 59 Scholes st., Brooklyn, N. Y.
Karrner, G., 110 Hope st., B'klyn, N. Y.
Krips, C., 716 Cherry st, Phila., Pa.
Kuehner, C. F., 9 Allison st., Cincinnati, O.
Kuenhold, F. B. & Co., 303-305 N. J. R. R. av., Newark, N. J.
Kung, H., 221 Mill st., Rochester, N. Y.
Kunz, A. (fdr.), Springfield, Mass.
Kupferle Bros. Mfg. Co., 600 N. 3d. st., St. Louis, Mo.
Kupferle & Boisselier, 2d, c. Mound sts., St. Louis, Mo.
Lamp, P., 225 Cedar st., Milwaukee, Wis.
Landers, Edmund, 496 Water st., N. Y.
Lang, J. & Co., 44 Michigan st., Chicago, Ill.
Lapp, D. C., 631 Filbert st., Phila., Pa.
La Tourrette & Co., Middletown, O.
Ledig & Exley, 1838 N. 14th st., Phila., Pa.
Ledig & Herrlein, 821 Cherry st., Phila., Pa.
Lehigh Valley Brass Works, South Bethelhem, Pa.
Lehner, Johnson & Hoyer, 74 W. Monroe st., Chicago, Ill.
Leitch, R & Sons, 1214 D st., Wash'n, D. C.
Lennon & Co., 292 Wash'n st., Boston, Mass.
Letzing, C. T. & Co., 62 Sudbury st., Boston, Mass.
Lenk, J. & Bro., 276 Lodi st., Syracuse, N. Y.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Linde, F. C. & Co., South Norwalk, Conn.

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Litchfield, W. Rutherford av., c. Miller st., Charlestown, Mass.
Livingston & Co., 239 Wash'n av., Pittsb'g, Pa.
Lockwood, C. N. & Co., 18 Mechanic st., Newark, N. J.
Loeffelholz & Co., 170 Clinton st., Milwaukee, Wis.
Lonergan, J. E. & Co., 211 Race st., Phila., Pa.
Lott, A., 1109 Pacific st., B'klyn, N. Y.
Love, M. & Co., 39 Champlain st., Cleveland, O.
Luhrs & Smith, 73 12th st., Cincinnati, O.
Lunkenheimer, F., 15 E. 8th st., Cincinnati, O.
Lynch, M., Bangor, Me.
Lyon, J. W., 60 Friendship st., Providence, R. I.
Lyon, J. M., Newport, R. I.
McCafferty, J. H. & Co., 147 Columbus av., Boston, Mass.
McCambridge & Co., 523-525 Cherry st., Phila., Pa.
McCutcheon, S., 18 Ohio st., Buffalo, N. Y.
McElroy Bros., 223 Grand st., N. Y.
McFarland, Wm., Trenton, N. J.
McGann, T. F., 104-106 Portland st., Boston, Mass.
McGowan Pump Co. (The), 143 W. 2d st., Cincinnati, O.
McKay Mfg. Co., 29, c. Liberty st., Pittsb'g, Pa.
McKenna, A. & T., 84 3d av., Pittsb'g, Pa.
McKenna, Jas. J. & Bro., 424 E. 23d st., N. Y.
McKnight, W., 44 Penn av., Pittsb'g, Pa.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
McShane, H. & Co., 415 North st., Balt., Md.
Macnier, L., 55 N. 7th st., Phila., Pa.
Maguire & Jones, Portland, Me.
Manhattan Brass Foundry & Machine Works, 438-440 E. 10th st., N. Y.
Mansfield & Co., 57 1st av., Pittsb'g, Pa.
Martin, Benajah M., 83 S. 5th av., N. Y.
Massey & Donne, 69 Lake st., Chicago, Ill.
Mayer, E. C., 1214 S. 7th st., St. Louis, Mo.
Mayhew, P. E., 15 S. Canal st., Chicago, Ill.
Measures, Joseph, 141-143 Portland st., Boston, Mass.
Meeker, S. J., 95 Clay st., Newark, N. J.
Meller, W., 336 Barclay st., Milwaukee, Wis.
Meneely, G. R. J., S. Albany, ab. North st., West Troy, N. Y.
Mergott, J. E., 10-12 Ward st., Newark, N. J.
Merriam, F. H., 201 Ontario st., Cleveland, O.
Messmer F. Faucet Mfg. Co., 210 S. 3d st., St. Louis, Mo.
Metal Novelty Works, 259 Randolph st., Chicago, Ill.
Miami Brass Works, 10-14 E. 9th st., Cincinnati, Ohio.
Michaels & Schuermann, 182 W. Pearl st., Cincinnati, O.
Middelberg, C., 625 Commerce st., Phila., Pa.
Miller, A. B., Stonington, Conn.
Miller, N. D. & Co., Portsmouth, N. H.
Miller, Thomas, 34 W. 3d st., N. Y.
Miller, Thomas, Jr., 119 Prince st., N. Y.
Minneapolis Brass Works, Minneapolis, Minn.
Mitchell, R. & Co., 380 Atlantic av., Boston, M.
Moffatt, Wm., Davenport, Iowa.
Montgomery & Co., 21 Frankfort st., Cleveland, Ohio.
Moore, T., 80 Elm st., N. Y.
More, Jones & Co., 1608 N. 8th st., St. Louis, Mo.
Morse, J. F., Oshkosh st., Milwaukee, Wis.
Mousley, C., 1241 Howard st., Phila., Pa.
Mowry & Phillips, 105-107 North st., Boston, M.
Munn, T., Bay City, Mich.
Nageldinger, J., 104 Centre st., N. Y
Nashua Lock Co., Nashua, N. H.
National Iron & Brass Works, Dubuque, Iowa.
Neisel, H., Hoboken, N. J.
Nellen, W., 340 Barclay st., Milwaukee, Wis.
Nelson & Finkel, 439 E. 10th st., N. Y.
Neubacher, L., 92 E. Georgia st., Indianapolis, Ind.
Nevey Bros., Lowell, Mass.
Newell, W. & Co., Central Falls, R. I.
New Haven Car Trimming Co., 71 Goffe st., New Haven, Conn.
N. Y. Brass & Wire Works Co., 173 Grand st., N. Y.
Nicoll's, Wm., Sons, 16 Hight st., B'klyn, N. Y.
North Side Brass Works, 57 N. Wells st., Chicago, Ill.
Nottingham & Co., Pearl, c. Plum st., Cincinnati, O.
Novelty Brass Foundry, 146 5th av., Louisville, Ky.
Novelty Works Co. (The), 44-46 Woodbridge st., Detroit, Mich.
Oberdorfer, M. L. & Co., 175 E. Washington st., Syracuse, N. Y.
O'Connell, P. J. & Son (founders), 179-183 Main st., Springfield, Mass.
Ohio Machine Co., Middleport, O.
Ott, G. F., 207-213 Buttonwood st., Phila., Pa.
Oneco Mfg. Co. (The), 43-49 Water st., New London, Conn.
Oregon Brass Works, Portland, Ore.
Owens, O., 226 Washington st., Chicago, Ill.
Owens, R., 110 W. Monroe st., Chicago, Ill.
Palmenberg, Joseph R., 466-468 Broome st., N. Y.
Parkins, C., 30 R. R. av., Jersey City, N. J.
Paulson, T., 13 Water st., Brooklyn, N. Y.
Pawtucket Brass Foundry, Pawtucket, R. I.
Peabody, T. J., 20 Franklin st., B'klyn, N. Y.
Peck Bros. & Co., 70-72 Franklin st., New Haven, Conn.
Peet, R. & Co., Minneapolis, Minn.
Peet, Valve Co., 163 Albany st., Boston, Mass.
Pepper, J., 186 Plymouth st., B'klyn, N. Y.
Pequot Brass Foundry Co., Norwich, Conn.
Perdreaux, H., 469 E. 151st st., N. Y.
Perkes, C., 418 Library st., Phila., Pa.
Perkes, Charles, 627 Arch st., Phila., Pa.
Perry & Dumont, Nashville, Tenn.
Peters Brass Foundry & Plating Co., 34 E. 5th st., Cincinnati, O.
Phillips, T. A. & Co., 75 S. Main st., Providence, R. I.
Phillips, W. P. & Co., 71 Sudbury st., Boston, Mass.
Phœnix Lock Works, 135-137 Halsey st., Newark, N. J.
Phosphor-Bronze Smelting Co. (Ltd.), 512 Arch st., Phila., Pa.
Pioneer Brass Works, 110-112 S. Pennsylvania st., Indianapolis, Ind.
Pittsburgh Brass Co. (Ltd.), Isabella, c. Sandusky sts., Allegheny, Pa.
Pittburgh Bronze Co., 13th, c. Pike sts., Pittsb'g, Pa.
Pittsburgh Smelting Co., 13th, c. Pike sts., Pittsburgh, Pa.
Pittsburgh Supply Co., 105 Wood st., Pittsb'g, Pa.
Plume & Atwood Mfg. Co., 18 Murray st., N. Y.
Plume & Atwood Mfg. Co., 71 Pearl st., Boston, Mass.
Pomeroy Machine Co., Pomeroy, O.
Portsmouth Machine Co. (finishers), Portsmouth, N. H.
Powell, Wm. Co. (The), 50-54 Plum st., Cincinnati, O.
Powers, J., 438 E. 10th st., N. Y.
Power, Maurice J., 237 B'way, N. Y.
Providence Brass Foundry, 460 Eddy st., Providence, R. I.
Prunty, J. E., 15 S. Frederick st., Balt., Md.
Puffer, A. D. & Sons Mfg. Co., 46 Portland st., Boston, Mass.
Queen City Brass Works, Pearl, c. Plum sts., Cincinnati, O.
Rait, Jas., 12 High st., Boston, Mass.
Ranney, C. P., 33 King st., Cleveland, O.
Rarig, A. K. & Co., Columbus, O.
Raschke, O., 337 23d st., Detroit, Mich.
Raymond, A. D., 227 Congress st. W., Detroit, Mich.
Reed, G. T., Belfast, Me.
Reed, O. W., Nashua, N. H.
Rees, Shork & Co., Water, c. Short st., Pittsburgh, Pa.
Reeves, P. S., 760 S. Broad st., Phila., Pa.
Register, J. & Sons, Holliday, c. Saratoga st., Balt., Md.
Rensselaer Mfg. Co., 4th av., c. 12th st., Troy, N. Y.
Renton Bros., 70 West st., Brooklyn, N. Y.
Reynolds, Jas., 41-43 Orange st., New Haven, Ct.
Richmond Copper Works, Richmond, Va.

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Rome Brass & Copper Works, Rome, N. Y.
Rouse & Hills, 60 Frankfort st., Cleveland, O.
Roylance, J. Brass Mfg. Co. (The), 415 Mission st., San Francisco, Cal.
Rupp, F., 130 Polk st, Newark, N. J.
Russell, C. M., 458 E. 10th st., N. Y.
Russell & Son, Indianapolis, Ind.
Ryan, A. N., 230 Biddle st., St. Louis, Mo.
Ryan, J. J. & Co., 72 W. Monroe st., Chicago, Ill.
Saginaw Novelty Works, Saginaw, Mich.
Sands Bros., 6 Reade st., N. Y.
San Francisco Brass Works, 413 Mission st., San Francisco, Cal.
Saville, T., 1231 Buddins st, Phila., Pa.
Scanlon, Michael, r. 84 Mulberry st., N. Y.
Schilling & Maurer, 46 Eldridge st., N. Y.
Shirer, F., 68 Gerry st., Brooklyn, N. Y.
Schneider & Trenkam Co., 475 Case av., Cleveland, O.
Schott, E., 80 Elm st., N. Y.
Schrader, A. & Son, 32 Rose st., N. Y.
Schuck, J. G., 34 W. 3d st., N. Y.
Schultz, A. & Co., 729 E. Pratt st., Balt., Md.
Scoville Mfg. Co., 421 Broome st., N. Y.
Scrannage Bros. & Cook, 79 Travers st., Boston, Mass.
Seeger, V., Toledo, O.
Seibel-Suessdorf Copper & Iron Mfg. Co., 2d, c. Lombard st., St. Louis, Mo.
Seist, H., 154 Clinton st., Milwaukee, Wis.
Shaw, Kendall & Co., Toledo, O.
Shaw, Luther & Sons (fdrs.), 29 Jackson st., Worcester, Mass.
Shelton Brass Hardware Co., 267 Federal st., Boston, Mass.
Shelton Iron & Brass Foundry, Birmingham, Conn.
Sheridan, W. J., 80 Portland st., Boston, Mass.
Sherriff, J. B. Son & Co., 68 Water st., Pittsb'g, Pa.
Shilling, B. F., Springfield, O.
Shilling, T., Columbus, O.
Shreve, Crump & Low Mfg. Co., 153 Columbus st., Boston, Mass.
Siepheus Roe Mfg. Co., 144 Woodward av., Detroit, Mich.
Simpson, J. M., Peoria, Ill.
Simpson, J., Columbus, O.
Skinner, W. E., Milford, Mich.
Smith, Alfred L., 163 Worthen st., Lowell, Mass.
Smith, A. D., 219 Eddy st., Providence, R. I.
Smith, D. B. & Son, Pine Meadow, Conn.
Smith, E., 30 N. Desplaines st., Chicago, Ill.
Smith, G., Leavenworth, Kansas.
Smith, P., Sidney, O.
Smith & Abbey Mfg. Co. (fdrs.), Chicopee, Mass.
Smith & Smart (fdrs.), Salem, Mass.
Sondermann, Horman, Throop av., c. Gwinnett st., Brooklyn, N. Y.
Somerville, T. & Sons, 320 13th st., Washington, D. C.
Spencer, I. S. S. Sons, Guilford, Conn.
Springer, G. W., Indianapolis, Ind.
Springfield Brass Foundry, 34 Taylor st., Springfield, Mass.
Springfield Brass Co. (The), Springfield, O.
Spring Perch Co., 114 John st., Bridgeport, Conn.
St. Paul Brass Works, St. Paul, Minn.
Staats & Dilmeier, 389-391 Kent av., Brooklyn, N. Y.
Stahle, D. M., Macon, Ga.
Starr Bros. Bell Co., East Hampton, Conn.
Star Brass Works, 63 Fort E. st., Detroit, Mich.
Star, W. B. & Co., 44 Lawrence st., Newark, N.J.
Stebbins, E., Mfg. Co. (founders), Springfield, Mass.
Stedman, P. H., Newport, R. I.
Stewart & Mattson Mfg. Co., 2042 N. 10th st., Phila., Pa.
Stickler, J. B., 511 w. Walnut st., Louisville, Ky.
Stieglitz, W., 37 Lorimer st., B'klyn, N. Y.
Stivers, A. & Son, 38 Mechanic st., Newark, N. J.
Striegel, H., 46 B'way, Buffalo, N. Y.
Stuckstede, H. & Co., 1312-1314 S. 2d st., St. Louis, Mo.
Stuhr, L., 317 Howard st., San Francisco, Cal.
Sturm, A. T., 114 Dover st., Balt., Md.
Sturm, C., 25 E. Huron st, Buffalo, N. Y.
Swartz, E. & Son, 100 3d av., Pittsburgh, Pa.
Sweatt & Chase, 82 Sudbury st., Boston, Mass.
Sweeney, Edw., 4 Duane st, N. Y.
Sweeney, J., & Barrett, 3 Dutch st., N. Y.
Sweeney, M., 21 N. J. R. R. av., Newark, N. J.
Syracuse Brass Co., 210 W. Fayette st., Syracuse, N. Y.
Tay, G. H. & Co., 614 Battery st., San Francisco, Cal.
Taylor, B., Paterson, N. J.
Taylor, C., Massillon, O.
Taylor, R., Paterson, N. J.
Taws & Hartmann, 1235 N. Front st., Pittsburgh, Pa.
Theberath, Chas. M., 10 Ward st., Newark, N. J. 56.
Thomas, H. & Bros., 86 Market st., Chicago, Ill.
Thompson, J., 1229 Long la., Pittsburgh, Pa.
Titus, W. H., 317 B'way, B'klyn, N. Y.
Torrey, J. G. & Son, 180 Main st., Rockland, Me.
Trahern, F. B., Rockford, Ill.
Traut, A., 331 Ferry st., Newark, N. J.
Trefethern, D. A. (fdr.), Taunton, Mass.
Trenter, J. P., 84 Market st, Chicago, Ill.
Tubal Cain Brass Works, 74 W. Monroe st., Chicago, Ill.
Turner, E. S., 2 La Salle av., Chicago, Ill.
Turner & Seymour Mfg. Co. (The), Torrington, Conn.
Union Brass & Iron Works, 105 Tremont st., San Francisco, Cal.
United Brass Co. (The, 75 Fulton st., N. Y.
Utica Gas Fixture Co., 15 Charlotte st., Utica, N. Y.
Utica Steam Gauge Co., Utica, N. Y.
Valley Iron Works, Appleton, Wis.
Van Duzen & Tift, 102 E. 2d st., Cincinnati, O. 57,
Vannevar, E. B., 58 Fulton st., Boston, Mass.
Varney, D. B., Manchester, N. H.
Varwig Faucet & Bung Co., 214 Wade st., Cincinnati, O
Vials, E. P., Richmond, Va.
Vulcan Brass & Foundry Co., New Castle, Pa.
Walking, F. L. (fdr.), East Cambridge, Mass.
Wall Mfg. Co. (The), Cobalt, Conn.
Watlers & Hodge, Dubuque, Iowa.
Ward, W. H. & Co., 140 Oliver st., Boston, Mass.
Ward & Plant, 1949 Hancock st, Phila., Pa.
Warden, McClelland & Co., 25 B'way, Cincinnati, Ohio.
Ware & Smith (fdrs.), Lowell, Mass.
Waterbury Brass Co., 296 B'way, N. Y.
Waterbury Brass Co., Waterbury, Conn.
Waterbury Mfg. Co, Waterbury, Conn.
Waters, A. S., Jr., Salem, Mass.
Watson, S. J., Bath, Me.
Watt, T. P., 183 Commerce st., Newark, N. J.
Watt, R. J. & Co., 208 Vanburen st., Chicago, Ill.
Watts Campbell Co., 288 Ogden st., Newark, N. J.
Watts, J. E. (finisher), Lawrence, Mass.
Webster & Warren, 507 Vincent st., Phila., Pa.
Weed & Kingwill, 125 1st st., San Francisco, Cal.
Welch, F., Houston, Texas.
Welch, G. H., 64 Market st., Hartford, Conn.
Wells, L. H., 24 Foster st., Worcester, Mass.
Wentworth Mfg. Co., 92 Pearl st., Boston, Mass.
Wesson, Samuel (finisher), 34 Southbridge st., Worcester, Mass.
Western Brass Mfg. Co. (The), 17 S. 6th st., St. Louis, Mo.
Whately, G. B., 139 Lewis st., N. Y.
White, Edw. C., 531 W. 23d st., N. Y.
White, J. R., 417 N. 12th st., Phila., Pa.
White, S. 1 Bark st., Providence, R. I.
Whitehead, J. & Son, Dayton, O.
Whray, H. & Son, 193 Mill st., Rochester, N. Y.
Wiechardt & Mingle, 441 Berks st., Phila. Pa.
Wild, T. S. & Son, 110 Indiana st., Chicago, Ill.

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Williams, H. C. & Co., 230 Stanley st., New Britain, Conn.
Williamson, L. C., Quincy, Ill.
Wilson, D., 510 W. 33d st., N. Y.
Wilson, J. B. & Co., Fort, c. 18th sts., Detroit, Mich.
Wilson Mfg. Co., New London, Conn.
Wilson, Snyder & Co., 52 Water st., Pittsb'g, Pa.
Wind, C. D. & Co., 113 Morgan st., St. Louis, Mo.
Winslow Bros. Co. (The), 99-109 W. Monroe st., Chicago, Ill.
Winslow, J. (fdr.), Fairhaven, Mass.
Winslow, S. E., 34 Beach st., Boston, Mass.
Winsor, Ira & Co., 122 Dorrance st., Providence, R. I.
Wohlfarth, Anna K., 132 Leonard st., Brooklyn, N. Y.
Woodruff Miller & Co., Mt. Carmel, Conn.
Woodworth, Evans & Co.(Ltd.), 122 3d av., Pittsburgh, Pa.
Worrell, D. F., Wilmington, Del.
Worswick Mfg. Co., 99 Water st., Cincinnati, O.
Wright & Colwell, 11 E. Lee st., Balt., Md.
Wuensche, A. O., 72 Market st., Chicago, Ill.
Yawman & Erbe, 344 N. St. Paul st., Rochester, N. Y.
Zane, J. & Co., 81 Sudbury st., Boston, Mass.
Zusi, E., 80 Mechanic st., Newark, N. J.
Zusi, P., 115 N. J. R. R. av., Newark, N. J.
Zwiebel, E., Pottsville, Pa.

Brass Gas Fixtures.

Clow, Jas. B. & Son, 212 Lake st., Chicago, Ill.

Brass—Ornamental Work for Cars, Yachts, Etc.

Bradley & Hubbard Mfg. Co., Meriden, Conn., and 21 Barclay st., N. Y.
George, E. & Co., 82 South st., N. Y.
Shelton Brass Hardware Co, (The), Birmingham, Conn.
Stewart & Mattison Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.
Vannevar, E. B., 58 Fulton st., Boston, Mass.

Brass—Sheet, Rolls and Wire.

Andrews, A. H. & Co., 195 Wabash av., Chicago, Ill.
Ansonia Brass & Copper Co., 64 E. Washington st., Chicago, Ill.
Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., 24 Oliver st., Boston, Mass.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Bridgeport Brass Co., 19 Murray st., N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Besly, Chas. H. & Co., 175 E. Lake st., Chicago, Ill.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Chicago Brass Co., 76 Monroe st., Chicago, Ill.
Cincinnati Brass Works, Cincinnati, O
Clow, James B. & Son, 222 E. Lake st., Chicago, Ill.
Columbia Rolling Mill Co., 132 Nassau st., N. Y.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Du Quoin Iron Works, Du Quoin, Ill.
Fieldhouse & Dutcher Mfg. Co., 30 W. Monroe st., Chicago, Ill.
Galvin Brass & Iron Works, 35 5th av., Chicago, Ill.
Griggs, E. D., 63 Duane st., N. Y.
Harrington & King Perforating Co., 234 N. Union st., Chicago, Ill.
Holmes, Booth & Haydens, 185 Dearborn st. (room 10), Chicago, Ill.; 23 Park pl., N. Y.
Housatonic Brass Co., 154 E. Lake st., Chicago, Ill.
Hussey, C. G. & Co., Pittsb'g, Pa.
Jacobs, Theo. & Co., 82 S. Market st., Chicago, Ill.
Ludlow-Saylor Wire Co., 116 S. 4th st., Phila., Pa.
Mansfield & Co. (Ltd.), 57 1st av., Pittsb'g, Pa.
N. Y. Brass Co., 53 Dearborn st., Chicago, Ill.
Palmer Mfg. Co., 86 E. Lake st., Chicago, Ill.
Plume & Atwood Mfg. Co., 18 Murray st., N. Y.; Boston, Chicago.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Pope, T. J. & Bro., 292 Pearl st., N. Y.
Preston, E. B. & Co., 415 5th av., Chicago, Ill.
T. C. Richards Hardware Co., West Winsted, Conn.
Riley & Osborne, 67 E. Washington st. (room 17), Chicago, Ill.
Scoville Mfg. Co., 183 E. Lake st., Chicago, Ill.
Scoville Mfg. Co., Waterbury, Conn.
Union Brass Architectural Works, 91 E. Ohio st., Chicago, Ill.
Union Brass Mfg. Co., 112 N. Franklin st., Chicago, Ill.
Walworth Mfg. Co., 14 Oliver st., Boston, Mass.
Waterbury Brass Co., Waterbury, Conn.; 296 B'way, N. Y.
Whittaker, Chas. Mfg. Co., 237 E. Lake st., Chicago, Ill.
Wild, Thos. S. & Son, 140 E. Indiana st., Chicago, Ill.
Wood, E. D., 88 E. Lake st., Chicago, Ill.

Bricks—Enameled Building.

Fisher, Erskine W., 18 B'way, N. Y. 65.
Fleming, Howard, 23 Liberty st., N. Y.

Bricks—Hollow.

Calumet Fire Clay Co., 57 Kilby st., Boston, Mass.
Frost, King Co., 34 S. Del. av., Phila., Pa.

Brick Mfrs. & Dealers.

Abbott Brick Co., Chicago av., c. Hamilton av., Chicago, Ill.
Abbott, N. B., Columbus, O.
Acker & Co., N. Capital, c. E st., Washington, D. C.
Adams Brick Co., Indianapolis, Ind.
Adams, M., O'Donnell, c. 16th st., Balt., Md.
Adams & Son, Montague City, Mass.
Agner, G., Rochester, Pa.
Alden, H., Thompsonville, Conn.
Alderman & Co., Collinsville, Conn.
Aldridge Bros., Dutchess Junction, N. Y.
Allen, A., Wilmington, Del.
Allen, F. C., Wallingford, Conn.
Allen, J., Toledo, O.
Allers, J. A., 1200 S. Charles st., Baltimore, Md.
Allerton, F., Alliance, O.
Alling, E. N., Kensington, Conn.
Allison B. J. & Co., Haverstraw, N. Y.
Allison, G. G., Haverstraw, N. Y.
Allison, Wood & Allison, Haverstraw, N. Y.
Allison, Wood & Keenan, Haverstraw, N. Y.
Alsipe & Bro., Kansas City Mo.
Alsip, F. & W. H., 159 La Salle st., Chicago, Ill.
Ames & Hollinger, Tallahassee, Fla.
Amman, F. J., Hawthorne av., Chicago, Ill.
Anderson Pressed Brick Co., 50 Bromfield, st., Boston, Mass.
Anderson, W. A. & Co., Charlstown, W. Va.
Anderson, W. F., Macon, Ga.
Armstrong, W., Rome, N. Y.
Armstrong, W., Portage City, Wis.
Arscott, R., Athens, O.
Arthur, G. D. & Co., Croton Landing, N. Y.
Ash, J., Ada, O.
Atherton & Keller, Mansfield, O.
Atkinson & Cliff, Rock Island, Ill.
Atwood & Briggs, Akron, O.
Ault, Morrow & Co., Jeddo, O.
Avery, J. D., Verplanck, N. Y.
Bagby & Earman, Staunton, Va.
Bahney, E., Kansas City, Mo.
Bailey, J., Akron, O.
Bailey & Hughes, Payne, O.

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Ball, G. W., Keene, N. H.
Banyea, J., Vergennes, Vt.
Barker, A. W. & Co., Chaska, Minn.
Barker, L., Beverly, Mass.
Barkwell, C. G., 1173 Case av., Cleveland, O.
Barnitz, W., Carlisle, Pa.
Barrow, J., Cassville, Wis.
Bartges, A. F., Akron, O.
Bartlett, J. C., Rhodes av., Cleveland, O.
Bartley E. A., Rittenhouse, c. Rosina sts., Phila., Pa.,
Bartow Brick Co., Bartow, Fla.
Bates, J. T., Columbus, Ga.
Bates & Bollinger, Rising Sun, O.
Bates & Son, Darlington, Wis.
Bauers, J. G., ft. Budd st., Cincinnati, O.
Baurichter, J. F., 22d Ward, Cincinnati, O.
Bauschlinger, D., Bucyrus, O.
Baxter, D. S., Lansingburgh, N. Y.
Bay State Brick Co., North Cambridge, Mass.
Bay State Brick Co., Medford, Mass.
Bay State Brick Co., 5 Pemberton sq., Boston, Mass.
Bazille, E. W., St. Paul, Minn.
Beach & Son, West, c. Bridge st., New Milford, Conn.
Beale & Co., Norfolk, Va.
Becker, C. R., Flint, Mich.
Becker, J. F. & Co., Elston av., Chicago, Ill.
Becket, J. W., Dallas av., Pittsburgh, Pa.
Beggs, J. H. & Co., Wilmington, Del.
Behney, M. B., Kansas City, Mo.
Belknap & Co., Columbus, O.
Belton Brick Mfg. Co., Belton, Texas.
Bemenderfer, H., Goshen, Ind.
Bennett Brick & Tile Co., Jackson, Mich.
Bennett, J., 2261 Kensington av., Phila., P.
Bennett, R., Tonowanda, Pa.
Benson & Gillett, Aurora, Ill.
Beresford, Vicksburg, Miss.
Berg & Johnson Bros., Shingle Creek, Minn.
Berger, M., 15th, c. Gallagher st., Louisville, Ky.
Bertolet, A., N. 26th st., c. Lehigh av., Phila., Pa.
Bethell, W. P., Danville, Va.
Bertolet, B., N. 30th st., c. Columbia av., Phila., Pa.
Beveredge, J. T., Jackson, Tenn.
Bilheimer W., Harrisonburg, Va.
Bierline & Sons, Chaska, Minn.
Binmore, W., Independence st., Cleveland, O.
Bishop, Bros., New London, Conn.
Bishop, E. S., North Haven, Conn.
Blackensick, B., Quincy, Ill.
Blair, D. & Bros., Elm, c. Liberty av., Pittsb'gh, Pa.
Blair's, J. M. Sons, 55 W. 4th st., Cincinnati, O.
Blake, G. J., Macon, Ga.
Blakely, C. & Son, Lynn, Mass.
Bielle, J., Columbus, O.
Block, H. A., Watertown, Wis.
Bly & Granbury, Bismarck, Dak.
Bober & Semmerling, Hawthorne av., Chicago, Ill.
Bockweg, J., ft. York st., Cincinnati, O.
Bodley, J., Wheeling, W. Va.
Boehm, A., Tiffin, O.
Boehme & Jacobs, Attenburg, Mo.
Bohen, J., Chicopee, Mass.
Boice, J. R., Toledo, O.
Bondurant & Jopling, Augusta, Ga.
Boren, W. & Son, Dayton, O.
Booth & Flinn, Forbes, nr. Seneca sts., Pittsburgh, Pa.
Bond & Hanchett, Milwaukee, Wis.
Boulter, E. A. & A. L., 1617 North st., Phila., Pa.
Bowen & Budd, Montgomery, O.
Bowers, J. R., Revere, Mass.
Bowers, S., Southington, Conn.
Boyd & Hardin, Urbana, O.
Boynton, A., South Coventry, Conn.
Bram, A., Randolph, N. Y.
Branstetter, A., Wooster, O.
Branston & Twells, Rochester, O.
Brewer Brick Co., Brewer, Me.
Brewer, W., New Windsor, N. Y.
Brick Makers Exchange Co., 5 Euclid av., Cleveland, O.
Briel, S., Columbus, O.
Brinckerhoff, T., Fishkill-on-the-Hudson, N. Y.
Brink, R., McLean av., Cincinnati, O.
Brockway & Nickerson, ft. W. 30th st., N. Y.
Brockway & Smith, Haverstraw, N. Y.
Brown, Clark & Co., Grand Rapids, Mich.
Brown, G. M., Natchez, Miss.
Brown, J. H. & W. W., Colchester, Vt.
Brown, L. P., East Hartford, Conn.
Brown & Bunker, Epping, N. H.
Brown & O'Connor, Hornellsville, N. Y.
Brown & Wulff, 58 Plum st., Cincinnati, O.
Brunner, A. & Co., Red Lake Falls, Minn.
Bruns, A., Emming st., W. of Clifton av., Cincinnati, O.
Brush Bros., 1 Arcade Bldg., Buffalo, N. Y.
Buckles, C. C., Xenia, O.
Buckley, & Co., Haverstraw, N. Y.
Buckwater, D. R., Phœnixville, Pa.
Budd, W. D., Matteawan, N. Y.
Buente & Hoge, Evansville, Ind.
Buffalo Pressed Brick Co., 1 Harvey Blk., Buffalo, N. Y.
Bullen & Hoyte, Eau Claire, Wis.
Burgewald, W., Kimmswick, Mo.
Burke, D., Michigan av., Detroit, Mich.
Burnham, G. & Son, Milwaukee, Wis.
Burnham, J. F., Beverly, Mass.
Burnham, J. L. & Son, Milwaukee, Wis.
Burnham & McDaniel, Hollis, Me.
Burns Bros., Central av., Detroit, Mich.
Burns, P., N. Town la., c. N. 21st st., Phila., Pa.
Burns, Russell & Co., 535 Columbia av., Balt., Md.
Burt, F. H. & Son, Mannington, W. Va.
Busack, C., Milwaukee, Wis.
Busey, J. R., 301 N. Carey st., Balt., Md.
Bush, W. G. & Co., Nashville, Tenn.
Bushman Bros., Pemberville, O.
Bussell, E. B., Danville, Ky.
Butler, M., Austin, Texas.
Button & Tuttle, 3d st. Whf., San Francisco, Cal.
Byrne, P. & Son, 29th, n. Cumberland st., Phila., Pa.
Byrnes, J. F., Minneapolis, Minn.
Caldwell, D., Caldwell, O.
Caldwell, J. A., Rushville, Ind.
Cambria Tile & Brick Co., Golden, Col.
Camp, B. F., Campville, Fla.
Camp, R. J. & Bros., Campville, Fla.
Campbell, S., Medway, Mass.
Campbell & Rollins, Paris, Texas.
Candee & Smith, ft. E. 53d st., N. Y.
Capital Brick Co., 605 14th st., Washington, D. C.
Carbon Pressed Brick Co., 295 Washington st., Chicago, Ill.
Carleton & Sons, Red Lake Falls, Minn.
Carmack, J. S. & Son, Payne, O.
Carr & Smith, Haverstraw, N. Y.
Carroll Brick Co., 5 N. Eutaw st., Balt., Md.
Carroll, H. C. & Sons, Haverford, c. N. 58th st., Phila., Pa.
Carson, D., Jr., New Windsor, N. Y.
Carter & Bowles, Richmond, Va.
Case & Co., Rock Island, Ill.
Casey, T., 164 Devonshire st., Boston, Mass.
Casler & Kelly, Camillus, N. Y.
Chadwick & Marlow, Watertown, Wis.
Chambers, L., Sandusky, O.
Chappell, C. E., Charlotte, Mich.
Chase, E. & Sons, Milwaukee, Wis.
Chattahoochee Brick Co., Atlanta, Ga.
Chattanooga River Brick Co., Chattanooga, Tenn.
Chicago Anderson Pressed Brick Co., 189-191 La Salle st., Chicago, Ill.
Childs & Sons, 13th, c. D st., Washington, D. C.
Christiansen & Galaway, 161 La Salle st., Chicago, Ill.
Christie & McCabe, Haverstraw, N. Y.
Church, J. B. & Co., Golden Col.
Cisler, T. C. & Co., Marietta, O.
Clark, Ansel, 18 Water st., Norwich, Conn.
Clark, G. W., Union Springs, N. Y.

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Clendenin, C. A., Gallipolis, O.
Clippert, C. F., 45 Congress st., Detroit, Mich.
Clixby, J. H., Martin's av., Detroit, Mich.
Clixby, T., Martin's av., Detroit, Mich.
Cloes, J., West Bellville, Ill.
Cluchy, J., Saint Johnsbury, Vt.
Coady, T., Montowese, Conn.
Coaldale Brick & Mining Co., Warriors Station, Ala.
Coats, Wm. & T. S., Raymondville, N. Y.
Coffin, H. R. T., Glens Falls, N. Y.
Cofran, S. M., Cambridge, Mass.
Cofran, S. M., 35 Hawley st., Boston, Mass.
Colson, J., San Antonio, Texas.
Conklin, J., Stony Point, N. Y.
Conkling, H. J., 144-152 E. Pearl st., Cincinnati, Ohio.
Conn. River Brick Co., Springfield, Mass.
Connell & Kell, East Liverpool, O.
Conrad, J., Columbus, O.
Cook, Brown & Co., Oshkosh, Wis.
Cook, F. D., Trenton, N. J.
Cooper Bros., Akron, O.
Copen, J., Parkersburg, W. Va.
Cordts, J. H. & Co., Kingston, N. Y.
Coryeon, J., Bay City, Mich.
Couden, Dorin & Co., Michigan City, Ind.
Covert, N., Dutchess Junction, N. Y.
Cowden, D., Lancaster, O.
Craven, R., Monroe, Wis.
Crawford, R., Gray's la., c. Race st., Phila., Pa.
Crawford, T., Cedar, n. Liberty av., Pittsburgh, Pa.
Crawley, D. C. & Co., Shingiss, c. Locust sts., Pittsburgh, Pa.
Craycroft, T. B., Italia, Fla.
Creal, A. B., Scio, O.
Criswell, J. M., Bellaire, O.
Critzer & Nobbs, Al, O.
Crockett, C., Abbott Village, Me.
Crofut, C., New Preston, Conn.
Cronenwitt, J., Galion, O.
Cropley, R. L., Canal, c. Potomac av., Wash'n, D. C.
Croughton, F. H. & Co., Columbus, O.
Crowley, G., New Salem, Mass.
Crowley, R., Haverstraw, N. Y.
Crozier Bros., Bellaire, O.
Cullen, J., 3301 Independence st., Cleveland, O.
Cullen, P., Independence st., Cleveland, O.
Curtis & Austin, Kansas City, Mo.
Curtis & Pope, 774 Albany st., Boston, Mass.
Damhorst, G., Quincy, Ill.
Damhorst, S., Quincy, Ill.
Damon, S. R., Lancaster, Mass.
Daniel, J., Michigan av. n. Martin st.. Detroit, Mich.
Daniels, T. M., Toronto, O.
Davenport Brick Co., 55 Equitable Bldg., Boston, Mass.
Darden, E., Campville, Fla.
Darrow, M., New London, Conn.
Dashields, W. & Son, Beason, c. Hull sts., Balt., Md
Davidson, H., New Windsor, N. Y.
Davidson, L. H., Scio, O.
Davis B., Richmond, Va.
Davis, B. W., Atlanta, Ga.
Davis, E. P., Brenham, Texas.
Davis, T. N., Denver, Col.
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Davis & Thresher, Medford, Mass.
Dawson & Towl, Clay st., Cleveland, O.
Day, G. H., 164 Devonshire, Boston, Mass.
Delss, H., Omaha, Neb.
Delarigne, A., Peters, c. Jordan av., New Orleans, La
Delfs, H., Davenport, Iowa.
Dennis, T. & Co., New Britain, Conn.
Dennis & Tower, Berlin, Conn.
Dennis & Son, New Britain, Conn.
Densmore, J., Lebanon, N. H.
Derbyshire, J., Haverstraw, N. Y.
De Rosay, L. E. & Son, 35 Hawley st., Boston, Mass.
Des Moines Brick Tile Co., Des Moines, Iowa.
Detroit Brick Co., 45 Congress st., W., Detroit, Mich.
Dewey & Locy, Fostoria, O.
Dewhurst, J. & Co., New Brighton, Pa.
Dickson, H., Tustine, c. Seneca st., Pittsb'g, Pa.
Dietschler, H., 870 Clinton st., Buffalo, N. Y.
Dingee, E. S., Ridge av., n. N. 30th st., Phila., Pa.
Dingee, J., N. 27th st., n. Lehigh av., Phila., Pa.
Dingee, J. E., Hagert, c. N. 26th st, Phila., Pa.
Dixon Brick & Tile Co., Dixon, Ill.
Dixon, W., Columbus, O.
Dodge, A. S., N. Edgecomb, Me.
Dobbins, M., Long la., c. Mifflin st., Phila., Pa.
Dobbs, J. C., Gloucester, N. J.
Dolan, Bros., Hoosick Falls, N. Y.
Donacour, G., Plaistow, N. H.
Donnelly, A. & Son, Haverstraw, N. Y.
Donnelly, D. & Son, 200 E. Lexington st., Balt., Md.
Dore, D., Washington C. H., Ohio.
Dotterer, A. & Son, Long la., c. Morris st., Phila., Pa.
Doty, A. H., Main st., Hartford, Conn.
Doty, C. B., Main st., Hartford, Conn.
Dougherty, J. & F., Des Moines, Iowa.
Dowler, J., 1219 Thompson st., Phila., Pa.
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Downey, J., Kansas City, Mo.
Dox, H. D., Geneva, N. Y.
Drury Bros., Anderson, Ala.
Drury & Son, Essex Junction, Vt.
Duchemin, J. & F., New Vienna, O.
Duellman, J., Hamilton, O.
Duke, W. K., Springfield, O.
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Dunn County Pressed Brick Co., Menomonee, Wis.
Dunn, G., Greenbush, N. Y.
Dunn, J. W., 159 La Salle st., Chicago, Ill.
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Dunn, W., Washington C. H., Ohio.
Dyer, I., Skowhegan, Maine.
Early, J., Moorhead, Minn.
Earnest, J. S. & Bro., Topeka, Kan.
East Sheffield Brick Co., Sheffield, Ala.
Easterbrook, T., Rutland st., Cleveland, O.
Eaton, Wm., Bloomingdale st., Worcester, Mass.
Edgerton, W. D., Oswego Falls, N. Y.
Edmester, E. B., 164 Devonshire st., Boston, M.
Edmester, J. W., Chelsea, Mass.
Edwards & Hyde, Kansas City, Mo.
Egan & Ryan, Chattanooga, Tenn.
Egan & Welsh, 8th, n. Somerset st., Phila., Pa.
Egelhoff & Bro., 256 W. Main st., Louisville, Ky.
Egge & Haber, Allentown, Pa.
Eggers, Bros., Petrie st., Cleveland, O.
Eggers, F. H., 18 Public sq., Cleveland, O.
Eichel & Lowenthal, Evansville, Ind.
Enochs, J., 1622 Callowhill st., Phila., Pa.
Entress, J., Bedford av., Pittsburgh, Pa.
Epley, A. E. & Son, Denver, Col.
Equitable Brick Works, S. 41st, c. Chestnut sts., Phila., Pa.
Erwin, Fulton & Co., Shanesville, O.
Eureka Brick Mfg. Co., St. Louis, Mo.
Evans, S. D. West Townsend, Mass.
Excelsior Brick Co., 159 La Salle st., Chicago, Ill.
Excelsior Brick & Stone Co., 423 Walnut st., Phila., Pa.
Eyerley, S. G. & Bro., Mansfield, O.
Eyler J., Xenia, Ohio.
Farley, C., Mobile, Ala.
Fell, G. E., Trenton, N. J.
Fell, P., Trenton, N. J.
Fell, W. W. Co., Trenton, N. J.
Fell & Hell, Trenton, N. J.
Fell & Roberts, Trenton, N. J.
Felter Bros., Haverstraw, N. Y.
Felter, J., Haverstraw, N. Y.
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Fenstermacher, H. & J., Springfield, O.
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Fiesbeck W. & Son, Spring Grove av., Cincinnati, O.
Filley, H. H., Windsor, Conn.
Fisher, A., Verplanck, N. Y.
Fisher's Island Brick Mfg. Co., 13 State st., New Haven, Conn.
Fiske Coleman & Co., 62 Congress st., Boston, Mass.
Fitzgerald, T., Danville, Va.
Fitzsimmons, P. H., Newport, Ky.
Flanagan J., Boise City, Idaho Terr.
Fledwich, E., Alton, Ill.
Fleming, H., 23 Liberty st , N. Y.
Fletcher, A. B., Oswego Falls, N. Y.
Fletcher, C. C., Hartford, Me.
Fletcher & Thomas, 9 A., Ingall's Blk. Indianapolis, Ind.
Flood Bros., K't'a av., c. Allegh. av., Phila., Pa.
Flournoy & Co . Bibbville, Ala.
Flynt Building & Construction Co., Palmer, M.
Fowler, D., Jr. & Co., Haverstraw, N. Y.
Fowler, D. & Son, Haverstraw, N. Y.
Ford & Bro., ½ North M st., Washington, D. C.
Fosettel, F., Evansville, Ind.
Foster, D., 624 W. 30th st., N. Y.
Foster, E. A., 35 Hawley st., Boston, Mass.
Foster, O. S., 35 Hawley st., Boston, Mass.
Fox, J., Pulaski av., n. N. Town la., Phila., Pa.
Fox, J. B., Toledo, O.
Francis, E., Alexandria, Va.
Francy, J. & Son, Toronto, O.
Frank, J., Columbus, O.,
Frank, J. T., 954 Frankfort av., Louisville, Ky.
Freed, C. E., 3902 Germantown av., Phila., Pa.
Freshe, G. & Co., Stony Ridge, O.
Frie, J. G., 22d & Ward sts., Cincinnati, O.
Froehlich, A., Sheboygan, Wis.
Frost, O., Verplanck, N. Y.
Frye, G.W., Lchoupitoulas, c. Leontine sts, New Orleans, La.
Fox, John O. & Co., Putnam, Conn.
Fulcher & Dyers Brick Co., Nashville, Tenn.
Fuller, W. & Sons, ft. of Columbia st., Albany, N. Y.
Fullerton Bros., 2148 E. Norris st., Phila., Pa.
Galesburg Pressed Brick & Tile Co., 109 La Salle st., Chicago, Ill.
Gamble, J. M., Independence st., Cleveland, O.
Ganzmann, N., Belleville, Ill.
Garden City Brick & Tile Co., 161 La Salle st., Chicago, Ill.
Garrett & McNanigal, Union Furnace, O.
Garvin, W. J., West Winsted, Conn.
Gault, J., Hookset, N. H.
Gaynor, M., S. 29th, c. Dickinson sts., Phila., Pa.
Gedney, Dow & Paulhemus, Dutchess Junction, N. Y.
Gere, J. M., W. Fayette st., Syracuse, N. Y.
Gernert & Boro, Fisher av., n. Kane & Kentucky sts., Louisville, Ky.
Gesner, T. H., Woodland av., c. 65th st., Phila., Pa.
Gibson, J. D. & Co., Columbus, O.
Gibson, S. S. & Co., Youngstown, O.
Gilbert, G., Jr., Columbus, O.
Gillespie, J. & T., S. 27th, c. Reed sts., Phila., Pa.
Gillies & Frederick, Haverstraw, N. Y.
Gilligan & Isaacs, Charlestown, W. Va.
Ginezar, F., Des Moines, Iowa.
Gogner, P., Mahn av., n. Hudson st., Troy, N. Y.
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Golden Brick & Coal Co., Jackson, Mich.
Goldner, C. & Sons, 1499 Michigan av., Detroit, Mich.
Goodwin, H., N. 22d st., n. Indiana av., Phila., Pa.
Goodwin, L. Mendota, Ill.
Goodenough, G. E., Jay, Me.
Goodrich, E. A., Fitchburg, Mass.
Gordon, W., Berlin, Wis.
Gordon, J. M., Clinton st., c. Bailey av., Buffalo, N. Y.
Gorman, E. W., 2316 Fairmont av., Balt., Md.
Gottfried, J., Upper Sandusky, O.
Gould, A. H., Brewer, Me.
Gunn, B. & Co., N. Broad st., n. Indiana av., Phila. Pa.
Gunn, C., N. 22d, n. York st., Phila., Pa.
Gunkle, A. W., Indianapolis, Ind.
Gunther, F., Kenanee, Ill.
Gynn, Mrs. E., Independence st., Cleveland, O.
Graff & Summers, Huntingdon, c. N. 13th st., Phila., Pa.
Grant Bros., Freeport, Ill
Gratien, F. S., Brewer, Maine.
Great Western Brick & Sewer Pipe Works. Toronto, Ohio.
Greer, G., Cambridge, O.
Gregg & Griswold, Chaska, Minn.
Gregg & Griswold, Minneapolis, Minn.
Greisheimer, H., Chillicothe, O.
Grere, W., Evansville, Ind.
Greusel Bros., 337 3d st., Detroit, Mich.
Greusel, J. & Sons, Detroit, Mich.
Griese, H., Evansville, Ind.
Griffin & Davidson, La Salle, Ill.
Grinder, J. N., ½ c. L st., Washington, D. C.
Grisell, T. E. & Son, Upper Sandusky, O.
Grube, A., Springfield, O.
Grube Bros., Springfield, O.
Haggerty & Proctor, Michigan, c. Central av., Detroit, Mich.
Haake, F., 1466 Clinton st., Buffalo, N. Y.
Haar, H. Jefferson City, Mo.
Hall, A., Hamilton, O.
Hall, E. B., Toledo, O.
Hall, F. F., W. Falmouth, Me.
Hall, R. H., 120 Griswold st., Detroit, Mich.
Hall & Sons, 59 Towanda st., Buffalo, N. Y.
Ham & Carter, 730 Albany st., Boston, Mass.
Hamilton, S., Jr., 35 Broad st., N. Y.
Hampden Brick Works, Springfield, Mass.
Hammond, F. W., Canal Dover, O.
Hammond, W. K., 624 W. 30th st., N. Y.
Hanfield & Schmaults, Hackensack, N. J.
Hanke & Ehlert, Menasha, Wis.
Hanson, E., Cambria, nr. N. 2d st., Phila., Pa.
Harbers, A., McLean av., Cincinnati, O.
Harger, C. G., Canal Dover, O.
Harlammert, W., 18th st., c. Garland av., Louisville, Ky.
Harlammert, W., Jr., Dumesnill, W. of 17th st., Louisville, Ky.
Harland, E. & Co., S. Robey, c. 38th st., Chicago, Ill.
Harland & Harms, 159 La Salle st., Chicago, Ill.
Harland, E. & L. H., 159 La Salle st., Chicago, Ill.
Harlon, M., Cornish, N. H.
Harms, E., Terre Haute, Ind.
Harris Bros. Pressed Brick Co., 161 La Salle st., Chicago, Ill.
Harris, J. H., Macon, Ga.
Harris, W. B. & Bros., Zanesville, O.
Harris, W. H. & Bro., San Antonia, Texas.
Harrison, H., 189 Petrie st., Cleveland, O.
Harrison, W., 187 Petrie st., Cleveland, O.
Harrison, W. J., Independence st., Cleveland, O.
Harry Bros., Dallas, Texas.
Hasty, R. H., Shingle Creek, Minn.
Hart, J. W., Taunton, Mass.
Hartt, P., 604 W. 30th st., N. Y.
Harvey, N. D., Harvey's Canal, New Orleans, La.
Harvey's Canal Brick Mnf'y., Harvey's Canal, New Orleans, La.
Haviland & Kimball, Columbus, O.
Hayne, P., Goshen, N. Y.
Hayt & Alsip, 161 La Salle st., Chicago, Ill.
Hechinger, M., Chillicothe, O.
Head, F. W., Hookset, N. H.
Head & Dowst, Manchester, N. H.
Heafer, N. B. & Co., Bloomington, Ill.
Hearn, T., 5th, c Madison sts., Troy, N. Y.
Heaton, J., North Haven, Conn.
Heavner & Phillips, Buchannon, W. Va.
Hedge, B., Plymouth, Mass.
Hedges & Smith, 624 W. 30th st., N. Y.
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Heilman, W. H., Tiffin, Ohio.
Heilman & Son, Tiffin, O.

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Hennebohle, F., Moorhead, Minn.
Henning & Melvin, Chaska, Minn.
Henry Martin Brick Machine Mfg. Co. (The), Lancaster, Pa
Henry, W. D. & Co., 127 5th av., Pittsb'gh, Pa.
Herman, O., De Soto, Mo.
Herrell, J. E. & Co., S. Cap., c. Ga. av., Washington, D. C.
Herriman, R., Geddes, N. Y.
Herrmeyer Bros., St. Paul, Minn.
Hertel, J. & Sons, 1718 Gough st., Balti., Md.
Herzberg & Vogt, Milwaukee, Wis.
Heseman, S., Evansville, Ind.
Higinbotham, W. W., Windsor, Conn.
Hill, S. S., Haverhill, Mass.
Hillenbrand & Mayer, Hamilton av., c. Payne st., Louisville, Ky.
Hinchliff, W. E. & Co., 159 La Salle st., Chicago, Ill.
Hinsley, G., 319 Elston av., Chicago, Ill.
Hoag & Sherwood, Sing Sing, N. Y.
Hobart & Bowlus, Pemberville, O.
Hobbs, Glidden & Co., 94 State st., Boston, M.
Hoffman, J. J., 2002 Marshall av., Balt., Md.
Hoge, A., Evansville, Ind.
Hoskot, W. H., Dayton, O.
Holdener & Co., Belleville, Ill.
Hollinger & Ames, Tallahassee, Fla.
Holman & Sherman, Glens Falls, N. Y.
Holt, B. L. & Co., Montgomery, Ala.
Holt, S., Concord, N. H.
Holtman, H., Quincy, Ill.
Hooper, M. & Co., Bridgewater, Mass.
Horne, G. W., Dover, N. H.
Horton & Mable, Peekskill, N. Y.
Hoss & Dresbach, Dresbach, Minn.
Houck, E. L., Springfield, O.
Houck, W. H. & Sons, Springfield, O.
Howard, M. L., Columbus, Miss.
Huckestein, J., 37 Fairmount st., Alleghany, Pa.
Hue, J. L. & Co., Moline, Ill.
Hughes, J. M., Menomonee, Wis.
Hughes & McMasters, Dennison, O.
Huhn, J. R., S. 33d, c. Dickinson sts., Phila., Pa.
Hulsman, H., McLean av., Cincinnati, O.
Hundreiser, J. & Co., Hawthorne av., n. Wabansia av., Chicago, Ill.
Hunt, H. H. & Co., San Antonio, Texas.
Hunter, A., 52 Van Woert st., Albany, N. Y.
Hunting, H., Campbell st., Cleveland, O.
Hurdle & Bros., Ft. Leadenhall, Balt., Md.
Hurlburt, J., Mount Morris, N. Y.
Hurlinger, D., Warren, O.
Hursh, C. S., 164 Devonshire st., Boston, Mass.
Hutchinson, J., Hollidaysburg, Pa.
Hutchinson & Crown, Trenton, N. J.
Hydraulic Press Brick Co., 411 Olive st., St. Louis, Mo.
Hydraulic Press & Moulded Brick Co., 144 S. 6th st., Phila., Pa.
Hyns, F. Michigan av., Detroit, Mich.
Ihorst, H., 22d Ward, Cincinnati, O.
Illinois Pressed Brick Co., 161 La Salle st., Chicago, Ill.
Iron City Brick Co., Sheffield, Ala.
Ison, M. & Co., Riverside, Ala.
Israel & Hastings, R., Bethel, O.
Ittner Bros., Cal'a av., c. Sidney st., St. Louis, Mo.
Ives, A & Son, North Haven, Conn.
Jackman, J. J., Bismarck, Dak.
Jackson & Hughes, Attalla, Ala.
Jagger, C. W., St. Paul, Minn.
Jagger, J., St. Paul, Minn.
James, D. M., Jackson, O.
Janes, J., Chillicothe, O.
Jarden, J., Long la., nr. S. 26th st., Phila., Pa.
Jenkins, M. R., Fairlee, Vt.
Jepson, F. A., Columbus, Ga.
Jewett Brick Co., Akron, O.
Jeynes & Son, 26 Walker Blk., Detroit, Mich.
Johnson, C., Middletown, Conn.
Johnson, J., Fort Scott, Kan.
Johnson & Macomber, Taunton, Mass.
Johnston & Rankin, Bloomington, Ill.
Johnstown Mfg. Co., 218 S. 4th st., Phila., Pa.
Jones, D. A., 31st, c. California st., Chicago, Ill.
Jones, Dr. O. L., Cold Spring Harbor, N. Y.
Jones, W. P., Conshohocken, Pa.
Julian & Mead, M. C. R. R., Detroit, Mich.
Kane, M., New Park av., Hartford, Conn.
Kaps, J. & P., Portsmouth, O.
Karker, P. A., Chilton, Wis.
Katterjohann, H., 25th Ward, Cincinnati, O.
Kayser, Pattison & Green, Moscow, O.
Keeling, H., Canton, Ill.
Kehoe, J. F., Pensacola, Fla.
Kelly Bros., Plaistow, N. H.
Kelley, J., Bristol, n. N. 5th st., Phila., Pa.
Kelley, L., Indiana av., c. Orkney st., Phila., Pa.
Kelly, P., Newton R. R., n. New 2d st., Phila., Pa.
Kemp Bros., Kempsville, Fla.
Kennedy, F. H., N. 7th, n. Free st., Syracuse, N. Y.
Kenney, G., Litchfield, Conn.
Keystone Brickyard, 542 Tod st, Cleveland, O.
Kilne, W. H. & Co., Birmingham, Ala.
Kime Bros., Wharton, O.
Kiner & Laplante, Columbus, O.
King, E. T., New Iberia, La.
King & Lynch, Verplanck, N. Y.
Kinzel, J. C., Knoxville, Tenn.
Kirker, J. N., Manchester, O.
Kirkover, L., 1343 Clinton st., Buffalo, N. Y.
Kittredge, E. & J., Merrimac, N. H.
Kolde, D., 22d Ward, Cincinnati, O.
Kleymeyer & Klute, Henderson, Ky.
Kline, G., Jr., Bristol, n. N. 5th st., Phila., Pa.
Kling, G., Gallipolis, O.
Klockenbrink, C., Pendleton, O.
Kloecker, W., Dayton, O.
Knapp, A., Dubuque, Iowa.
Knapp, G., Haverstraw, N. Y.
Kuennen, J. A., 21st Ward, Cincinnati, O.
Knight, J. T., Fredericksburg, Va.
Knowlson, R., Chestnut, n. Locust st., Pittsb'g, Pa.
Kransgill, J., Preston st., S. of Railroad, Louisville, Ky.
Krapp, H. & Bros., Schiller av., n. Mary st., Louisville, Ky.
Krupp, L., Frankfort av., c. Pope st., Louisville, Ky.
Kuehn, A., Meyer st., c. Rhodes av., Cleveland Ohio.
Kuhbauch & Schoppenhorst, Lexington, c. 16th st., Louisville, Ky.
Laird, J. W., Jackson, O.
Lamb Bros., Moorhead, Minn.
Lammers, B. H., James, O.
Lamprey, J. S., 41 Tremont st., Boston, Mass.
Lane, W. H., Thompsonville, Conn.
Langevin, T., St. Paul, Minn.
Lanouette Bros., St. Paul, Minn.
Lanouette, V., St. Paul, Minn.
Lanyo, A., Larkins st., Detroit, Mich.
Laplante & Myr, Columbus, O.
Law, J. B., Darlington, S. C.
Lazure, J. V., Blanchester, O.
Leary, J. O., Springfield, Mass.
Lebeau, C. & Son, Canton, O.
LeClare, F. (Winooski), Colchester, Vt.
Ledgett & Son, New London, O.
Legnard, J. B., 159 La Salle st., Chicago, Ill.
Lehman, G., Bowling Green, Ky.
Leigh, J. W., Market, c. N. 54th st., Phila., Pa.
Lembeck, F., Lakeview, Ill.
Lembeck, J., Lakeview, Ill.
Leonard, A., Erie, Mich
Leonard & Roberts, Columbus, O.
Leonhard Bros., Canton, O.
Lester & Warner, 18 N. Paca st., Baltimore, Md,
Lettl, A., Larkins av., Detroit, Mich.
Lewis, E. M., Milldale, Conn.
Lewis, S. A., North Haven, Conn.
Lexington Stock Brick Co., Lexington, Ky.
Lichtenstadt, P., Mich. Canal, nr. S. Western av., Chicago, Ill.
Liddil, D. G., Blanchester, O.
Lill Bros., 144 La Salle st., Chicago, Ill.

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Lockwood & Kimball, 162 Washington st., Chicago, Ill.
Lorillard, Jacob, 65 South st., N. Y.
Lottmann. B., McLean av., Cincinnati, O.
Loucraft, J. M., 164 Devonshire st., Boston, M.
Louisville Stock Brick Co., Preston, c. A sts., Louisville, Ky.
Ludwig Bros., Caledonia, O.
Luedemann, H. & Co., Indianapolis, Ind.
Lumsford, G., Birmingham, Al.
Lutter & Bohnsack, Lakeview, Ill.
Lyons & Rowland, 2506 S. Broad st., Phila., Pa.
McCausland, J., Akron, O.
McCarthy, T., 1st av, S. Pearl st., Albany, N.Y.
McCay, J. & Son, Bridge, n. Adaline st., Fkd., Phila., Pa.
McCay, R. & W., Long la., c. Moore st., Phila., Pa.
McClendon, J. S., Atlanta, Ga.
McClure, J., 35 Hawley st., Boston, Mass.
McClure, M., Greenfield, Mass.
McCollister & Lewis, Circleville, O.
McCollum, J., Maple, c. 18th st., Louisville, Ky.
McCollum, S., Maple, W. 21st st., Louisville, Ky.
McConaughy, J., Johnstown, Pa.
McCord, P. & Bro., Martin's Ferry, O.
McCormick, C., Ypsilanti, Mich.
McCubbins, B. M., Breckenridge, Mo.
McCullough, J. B., Pensacola, Fla.
McCutcheon & Wagoner, Stony Ridge, O.
McDonald, A., Shelby, O.
McDonald, J. C., Church rd., Detroit, Mich.
McDonald, R. B., Montgomery, Ala.
McDougal, S., Charlotte, Mich.
McDowell, C., Ella st., n. Laurel av., Pittsb'gh, Pa.
McFadden, P., Mewasha, Wis.
McFarland, C. H., Sherman, Texas.
McGay & Chambers, Calverton rd., Balt., Md.
McGinty, M. B., Athens, Ga.
McGuire, T. & E., Haverstraw, N. Y.
McIlyar, W. & Bros., Cambridge, O.
McIntire, J. L., Rutland, Vt.
McKenzie, J. C., Adrian, Mich.
McKenzie, R. H., Hudson, Mich.
McKinley Bros., Liberty av., c. Pearl st., Pittsburgh, Pa.
McKitterick Bros., Jackson, O.
McKnight & Meirbochtol, Blakely, Minn.
McLean & Co., Fishkill-on-the-Hudson, N. Y.
McMahon & Co., Haverstraw, N. Y.
Mabbitt, J. J., Mohawk, N. Y.
Mack, W., Windsor, Conn.
Mad Brook Brick Co., Torrington, Conn.
Maginis, G., Indianapolis, Ind.
Main, R., 626 W. 30th st., N. Y.
Main, R., Kingston, N. Y.
Malley & Goldrich, Haverstraw, N. Y.
Mallon, P., Kearney, c. Market st., San Francisco, Cal.
Manchester & Philbrick, ft. E. 91st st., N. Y.
Manistee Brick & Tile Works, Manistee, Mich.
Mankato Drain Tile Works, Mankato, Minn.
Markey, C., Markey av., Detroit, Mich.
Markwood & Keesecker, Springfield, O.
Marshal & Ulrich, Upper Sandusky, O.
Marston & Durgin, Saco, Me.
Martin & Bro., S. cap., c. R. st., Washington, D. C.
Martin & Latta, Shingle Creek, Minn.
Martin & Nan Oven, Naperville, Ill.
Maryland Brick Co. (The), Calvert, c. Fayette st., Baltimore, M. D.
Mason, W., Groveport, O.
Masterson, A., Manchester, O.
Mather, O. R., Mankato, Minn.
Mattes & Holcomb, Newton Falls, O.
Mawhinney, M., Oakland st., Pittsburgh, Pa.
Mawhinney, W. G., Vickroy, n. Chestnut sts., Phila., Pa.
Maxwell & Gamble, Dennison, O.
May, J., La Fayette, Ind.
Maynard, E., Harrisville, Mich.
Maynard, R. & Bros., Richmond, Va.
Maynard & Goeke, Newport, Ky.
Mazin, J., Rutland, Vt.
Mazurie Bros., Uhrichsville, O.
Meaher, A., Mobile, Ala.
Mehrhoff Bros., Brick Mfg. Co., Little Ferry, N. J.
Mercer Bros., Salem, O.
Meringer & Co., Portsmouth, Va.
Merley, Dupont & Co., Louisville, O.
Merrick, C. S., 41 South av., Syracuse, N. Y.
Merwin, C. P., Berlin, Conn.
Metchers, A. McLean av., Cincinnati, O.
Metz, D. & Sons, Adams Ridge, O.
Metzner, F., Longtown, Mo.
Meyenberg Brick Co., 161 La Salle st., Chicago, Ill.
Meyer, C. F., St. Paul, Minn.
Meyerholtz, H. A. & Bro., Napoleon, O.
Middleton & Weatherford, Knoxville, Tenn.
Middlesex Co., Sayreville, N. J.
Miller, J., New Brighton rd., Alleghany, Pa.
Miller, J., Coshocton, O.
Miller, W. F., N. Broad, c. Somerset sts., Phila., Pa.
Miller & Vanvalen, 284 & 285 South st., N. Y.
Mills, E., Main st., Hartford, Conn.
Mills, James, 4th & R. R. av., Wilmington, Del.
Minneapolis Brick Co., Minneapolis, Minn.
Minsinger Bros., Prospect, nr. Lowen sts., Pittsb'g, Pa.
Montague, L. E. & D. P., Chattanooga, Tenn.
Moore, J. C., Morton, c. Hawk sts., Albany, N.Y.
Moore, P. H. & Co., Birmingham, Ala.
Moore & Lahey, Newburgh, N. Y.
Moreau, J., Montague, Mass.
Morgan, B., Vicksburg, Miss.
Morrell & Burnham, W. Farmingdale, Maine.
Morrison, S. D., Shingle Creek, Minn.
Morrison & Cole, Wharton, O.
Morrow & Harbaugh, New Lisbon, O.
Morse, J. G., Bloomingdale st., Worcester, Mass.
Morse, R. G. & Co., 498 Albany st., Boston, M.
Morton, J., Verplanck, N. Y.
Moulding, T., 162 La Salle st., Chicago, Ill.
Moulding, T., Hageman, Ind.
Moulton, C. L. & Co., East Brookfield, Mass.
Moulthrop, R., Eufaula, Ala.
Mueller, C., Walnut Hills, O.
Mufford, W., Fremont, O.
Munger, F., Dayton, O.
Munger & Bro., Dayton, O.
Murray & Morrisey, Haverstraw, N. Y.
Murphy, H., Bedford av., n. Erin st., Pittsburgh, Pa.
Murphy, H., Coshocton, O.
Murtha, D., N. Broad st., n. Gtn. av., Phila., Pa.
Myers, M., Kansas City, Mo.
Myers, W. F. & Co., Warren, O.
Mylroye Bros., Dodgeville, Wis.
Nason, George K., Willimantic, Conn.
Nass, J., Atchison, Kansas.
Nation, M. & Bro., Eaton, O.
Nayatt Brick Co. (Nayatt Point), Barrington, R. I.
Neal, J., Eaton, O.
Neely, T., Tustin, c. Seneca st., Pittsburgh, Pa.
Nesbit's, J., Sons, ft. E. 79th st., N. Y.
Newark Brick Co., Newark, Del.
New Britain Brick Co., New Britain, Conn.
N. E. Pressed Brick Co., Danvers, Mass.
New England Terra Cotta Lumber Co., 99 Milk st., Boston, Mass.
Newerf, Wm. H., Triangle st., n. Abbott rd., Buffalo, N. Y.
Newton, A. H. & Bro., Crescent, N. Y.
Newton & Co., Rathbone st., ab. North Ferry, Albany, N. Y.
N. Y. & N. J. Pressed Brick Co., 111 B'way, N. Y.
Neyland, J. & Co., Fort Meade, Fla.
Niagara Pressed Brick Co., Evansville, Ind.
Nicholson, E., Steubenville, O.
Nicholson, M., Steubenville, O.
Nickel, C. G. & Co., Eager st., c. Bradford al., Balt., Md.
Nickerson, P., ft. W. 30th st., N. Y.
Nolan, T., N. 7th, n. Free st., Syracuse, N. Y.
Nolting & Son, Indianapolis, Ind.
Oakes, N., Iowa City, Iowa.

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Ogan & Son, Dayton, O.
Ohio Valley Press Brick Co., Jackson, c. Shipp st., Louisville, Ky.
Oldfield, G., Norfolk, Va.
Oldfield, J., Haverstraw, N. Y.
O'Neil, B. J., Dubuque, Iowa.
O'Neal, J., Pensacola, Fla.
O'Neil & Corbett, Alexandria, Va.
Opetz, W., Hancock, Mich.
Orth, J., New Richmond, O.
Osborne, A. W., Denver, Col.
Osborn, F. A., Fitchburg, Mass.
Ostrander, J. & Son, 309 2d st., Troy, N. Y.
Oswald & Ferrin, Cherry Creek, N. Y.
Ottawa Fire Clay & Brick Works, Ottawa, Ill.
Otten, J., Davenport, Iowa.
Owen, W. B., 159 La Salle st., Chicago, Ill.
Owen & Co., Hageman, Ind.
Owens & Howell, Toledo, Ohio.
Packard, F., Petrie, n Guy st., Cleveland, O.
Page, J. W., & A. A., Ogdensburg, N. Y.
Page, Stone & Yancey, 36th st., c. Lewis av., Louisville, Ky.
Palmer, J., Wooster, O.
Parker, D., Bedford, N. H.
Parker, J. H. & G. B., Augusta, Ga.
Parker, J. J., West Chester, Pa.
Parker & Belford, Owosso, Mich.
Parker, Hazelton & Co., Atkin, Minn.
Parmelee, W. H., Essex, Conn.
Parry, W. W., Rome, N. Y.
Parry, Bros. & Co., 164 Devonshire st., Boston, Mass.
Parry, Bros. & Smith, North Cambridge, Mass.
Patchen, R. T., Huntington, Conn.
Patten, R. W. & Son, Amesbury, Mass.
Patent Brick Co., 512 California st., San Francisco, Cal.
Patton & Co., Ashville, N. C.
Peck, T. G. & G. H., Haverstraw, N. Y.
Peck, T. G. & Co., Haverstraw, N. Y.
Peckseth, L., Central Whf., Norwich, Conn.
Peerless Brick Co., 1003 Walnut st., Phila., Pa.
Pemberton, S., New Vienna, O.
Penfield, D. G., Danbury, Conn.
Penfield, J. W. & Son, Willoughby, O.
Perkins, F. A., Ormsby av. E. of Preston st., Louisville, Ky.
Perot, W. H., 33 S. Gay st., Balt., Md.
Pettingill, J. H. & Son, Lewiston, Me.
Pfister, J. H., 502 S. Wash'n st., Balt., Md.
Phillips, L., Marietta, O.
Pieper, W., Walnut Hills, O.
Pieraux, F., Green Bay, Wis.
Pierce & Beeson, Wilmington, Del.
Pigeon, Bros., Salem, O.
Piper, J. B., Estate of, 7 Clay st., San Francisco, Cal.
Pitcher & Creagar, 4 S. Paca st., Balt., Md.
Polnsett, C., Morestown, N. J.
Pogge & Moeller, 610 Elston av., Chicago, Ill.
Polak, J., Cedar Rapids, Iowa.
Pollard, I. H., Plaistow, N. H.
Porter, J. W., Athens, N. Y.
Pothast, A. B., Indianapolis, Ind.
Pothast, C., Indianapolis, Ind.
Potter, B. J. & Co., Kansas City, Mo.
Potter, E. W., Hamden, Conn.
Prante, H. A., Quincy, Ill.
Pratt, W. D., De Lassus, Mo.
Preiszer, W., 21st Ward, Cincinnati, O.
Preston, P., N. 7th, n. Free st., Syracuse, N.Y.
Prevost, J. C., Long Island City, N. Y.
Price, R., Clinton, Iowa.
Price & Payne, Galva, Ill.
Prichard, H., Galveston, Texas.
Printier & Co., Red Lake Falls, Minn.
Printz, J. H., Reading, Pa.
Pulaski McCallister, Circleville, O.
Purington & Kimball Brick Co., 161 La Salle st., Chicago, Ill.
Quigley, S. B & A. M., Mobile, Ala.
Quinebaug Brick Co., Danielsonville, Conn.
Quinnepiac Brick Co., 78 Church st., New Haven, Conn.
Quentmeyer & Bloomer, Watertown, Wis.
Rader, A., Xenia, Ohio.
Raible, C., McLean av., Cincinnati, O,
Ralston, D., 10th, n. Hoosick st., Troy, N. Y.
Raritan Hollow & Porous Brick Co., 115 B'way, N. Y.
Raymond Bros., 10 Washington st., South Norwalk, Conn.
Rechtenwald, J., Fremont, O.
Reddick, J. L., Niles, Mich.
Reeder, G., Chillicothe, O.
Reeve, A., Camden, N. J.
Reid, T., 183 Petrie st., Cleveland, O.
Reid & Co.., Jacksonville, Ill.
Remillard Brick Co., Oakland, Cal.
Repschlager, F., Ohio Canal, Cleveland, O.
Rice, F., Wash'n av., n. Carey st., Balt., Md.
Rich, C., Canton, O.
Rich, M., East Hampton, Mass.
Richards, A. & Co., 25 N. st., Wash'n, D. C.
Richards, E. T., Holyoke, Mass.
Richardson, J. & Co., Rochester, N. H.
Richardson, L., Ada, O.
Rider, Wm. W., Jr., Athens, N. Y.
Riffle Bros., Uhrichsville, O.
Rile, J. M., Adaline st., n. Bridge, W. Hall st., Phila., Pa.
Rines, J. E., Boscawen, N. H.
Riverside Brick Works, 26 Union st., New Orleans, La.
Roberti & Verbeuter, 62 9th st., Troy, N. Y.
Roberts Bros., Amanda, O.
Roberts, M., Colonie, c. Ten Broeck st., Albany, N Y.
Roberts & Davis, Berry, c. 3d sts., San Francisco, Cal.
Robertson, G. W., Middletown, N. Y.
Robinson, J. J. & Sons, Monument st. and Loney la., Baltimore, Md.
Robinson, G. W. & Son, 219 E. Fayette st., Balt., Md.
Robinson, S., Monument st. and Loney la., Balt., Md.
Robson, R., 120 Puffer st., Buffalo, N. Y.
Roche, J. B., Jacksonville, Fla.
Rochester Brick & Tile Mfg. Co., 243 Powers Bldgs., Rochester, N. Y.
Rochester German Brick & Tile Co., 279 S. St. Paul st., Rochester, N. Y.
Rockford Brick Co., Rockford, Ill.
Rodepouch, D., Lancaster, O.
Roehl Bros., Campbell, n. Reeves st., Cleveland, O.
Roehl, H., Independence st., Cleveland, O.
Roehl & Kuehn, Meyer av., Cleveland, O.
Rome Brick Co., Rome, Ga.
Roost & Klassen, Holland, Mich.
Rose Brick Co. (The), Newburgh, N. Y.
Rose Bros., Cortland st., N. Y.
Ross, C. H., Milwaukee, Wis.
Rose, G. & Co., Independence, O.
Rose, T. G., Hart la., n. Indiana av., Phila., Pa.
Ross, F. A., Terre Haute, Ind.
Rowley, J., Fremont, O.
Roy's Brick Yard, bel. Slaughter House, New Orleans, La.
Ruch, B., Davenport, Iowa.
Ruch, J. & Bro., Davenport, Iowa.
Rucker Compress Co., Athens, Ga.
Rundlett G. & Son, Epping, N. H.
Ruse Brick Co., Akron, O.
Russell, A., Petrie, c. Clay st., Cleveland, O.
Russell, C. L., Keene, N. H.
Russey, M. B., Dallas, Texas.
Rutherford, John, Lyon st., opp. depot, Bridgeport, Conn.
Rutherford, W. J. & Co., Augusta, Ga.
Ryan, T. C., Summit, Miss.
St. Johnsbury Brick Co., St. Johnsbury, Vt.
St. Paul Brick & Tile Co., Menomonee, Wis.
Sadler, T., Windsor Locks, Conn.
Sager, R., Adrian, Mich.
Salliotte & Rioppelle, Ecorse, Mich.
Sanborn & Hatch, 164 Devonshire st., Boston, Mass.
Sand, M. W., Cambridge, Mass.

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Saunders, T. A., Augusta, Me.
Sayre, J. R. Jr. & Co., River, n. Centre st. depot, Newark, N J.
Sayre & Fisher, Sayreville, N. J.
Schmeker, W., Base Ball Grounds, Cincinnati, Ohio.
Schmidt, W., Kenton, O.
Schmitt & Schmittdiel, Larkins av., Detroit., Mich.
Schnable, H., Fairmont, O.
Schnute, W., Evansville, Ind.
Schneider, A., Columbus, O.
Schneider, E. H. B., Houston, Texas.
Schonhardt, A., Sandusky, O.
Schott, J., Kansas City, Mo.
Schreiber, M., Ironton, O.
Scofield, R. B., Stamford, Conn.
Schultz, C. A., Kingston, N. Y.
Schmultz, J., Hackensack, N. J.
Schwoerer, T., 757 W. 6th st., Cincinnati, O.
Seabright, C., Martin's Ferry, O.
Seider. C., Springville. N. Y.
Seitter, F., Harrowgate la., Phila., Pa.
Seitter, R. Old Front, n. K st., Phila., Pa.
Senter & Wildermuth, Groveport, O.
Seymour, J. O., 805 Scott st., Balt., Md.
Shackelford Brick Works, 4250 N. 10th st., St. St. Louis, Mo.
Shade & McCanan, Troy, O.
Shadron Brick Co., Shadron, Neb.
Shafer Bros, Canajoharie, N. Y.
Shaffer & Stanley, Alliance, O.
Shafner, J., Arlington av., 31st Ward, Pittsb'g, Pa.
Shanafelt & Kuert, Kenton. O.
Shares, H. P., North Haven, Conn.
Shares, H. P., 90 State st., New Haven, Conn..
Sharpless, A. D., West Chester, Pa.
Sheppard, F., Ashland, O.
Sherwood & Johnson, Dresbach. Minn.
Shoch, N R., Frankford av., n. Bridge st. (Fkd), Phila., Pa.
Shoemaker, E. F., Columbus. O.
Shultz, G. S., 313 11th av., N. Y.
Sibley Bros. & Busby, Kansas City, Mo.
Sibley, O. A., East Brookfield, Mass.
Siegel, J., B'way, w. of 21st st., Louisville, Ky.
Sietman & Riepschlager, Ohio Canal, Cleveland, Ohio.
Simms, N. M., East Liverpool, O.
Simmont, F., Washington av., ext., Balt., Md.
Simpson, G. N., Pembroke, N. H.
Simpson, H. T. & Son, Pembroke, N. H.
Siner & Bro., Kensington av., n. Buckins st., Phila., Pa.
Skandia Brick Co., Rockford, Ill.
Slaybaugh, D. B., Shelby, O.
Smiley, F., Haverhill, Mass.
Smith, A. B., Springfield, O.
Smith, Adams & Co., 10 Trumbull st., Worcester, Mass.
Smith, D., Newburyport, Mass.
Smith, F., Bristol, n. N. 5th sts., Phila., Pa.
Smith, G., 111 B'way, N. Y.
Smith, Geo., 277 Bailey av., Buffalo, N. Y.
Smith, J., Morton, c. Eagle sts., Albany, N. Y.
Smith & Schwartz, 103 St. Paul st., Balt., Md.
Snedeker, Mrs. E., Haverstraw, N. Y.
Suer & Co., Warner st. W. of Clifton av., Cincinnati, O.
Snider, J., Columbus, O.
Snow, D. M. & Co., Montgomery, Ala.
Snow, J. & Co., Tuscaloosa, Ala.
Snyder & Hanna. Ney, O.
Solfishberg, C., Aurora, Ill.
South Baltimore Brick & Tile Co., 219 E. Germann st., Balt., Md.
Southern Ohio Brick & Tile Co., 48 Johnston Bldg., Cincinnati, O.
S. Pittsburgh Brick & Terra Cotta Co., South Pittsburgh, Tenn.
Sprague, McK., Gallipolis, O.
Spahr, A. C. & Co., Maysville, Ky.
Spahr, P., Carlisle, Pa.
Sparks & Solomon, Macon, Ga.
Spaulding, E. B., Everett, Mass.
Spedden & Nitsch, Wilkins av., c. Millington st., Balt., Md.
Sphar & Iliff, New Richmond, O.
Stallings, J. W. & Co., 123 S. Howard st., Balt, Md.
Stande & H. Uhl, Pana, Ill.
Stanford, F, Corry, Pa.
Staples, A. B., Taunton, Mass.
Staples, S. L., Taunton, Mass.
Starr & Snell, Shenandoah, O.
Stebbins, G., Toledo, O.
Steinkamp, G., McLean av., Cincinnati, O.
Stevens, C. J. & Bro., Portsmouth, O.
Stevens, C. O., Washington C. H., Ohio.
Stevens Fire Brick Co., Birmingham, Ala.
Stiles, I. L. & Son, 306 State st., New Haven, Ct.
Stillwaugh, J. & Son, Hamilton, O.
Stock, J., Pontiac, N. Y.
Stocker, F., East Saugus, Mass.
Stoddard & Hellier, Bangor, Me.
Stoughton, H. K., East Hartford, Conn.
Stoughton, S., East Hartford, Conn.
Straub, C., Council Bluffs, Iowa.
Strauss & Norris, Fostoria, O.
Streib, J. M., Bucyrus, O.
Strobach, Greiner & Co., Chaska, Minn.
Stuttenberg, H. H., Kansas City, Mo.
Suhrheinrich, W., Evansville, Ind.
Summers, E., Hagerstown. Md.
Surles & Gamble, East Liverpool, O.
Surles & Harris, East Liverpool, O.
Swartzwelder, H., Cumberland, Md.
Sweet, H. W., Chicago av., Chicago, Ill.
Sweet, N., 35 Hawley st., Boston, Mass.
Swords, B. C., Adrian, Mich.
Sword, P. L. & Son, 5 Euclid av., Cleveland, O.
Syracuse Pressed Brick Co., Midland av., Syracuse, N. Y.
Talladega Brick & Tile Co., Talladega, Ala.
Taphorn & Lucky, 25th Ward, Cincinnati, O.
Tate, W. H., Jacksonville, Fla.
Taunton Brick Co., Taunton, Mass.
Taylor, D. C. & Co., Kankakee, Ill.
Taylor, Piper & Co., 82 Water st., Boston, Mass.
Taylor, Siddon & Patterson, Kansas City, Mo.
Terry Bros., Kingston, N. Y.
Terwilliger, P., Fishkill-on the-Hudson. N. Y.
Thomas. E., Peru, Ind.
Thomas, E., Thomaston, Conn.
Thomaston Brick Co., Thomaston, Conn.
Thompson, L., Epping, N. H.
Thompson, R. R. & Co., Maxwell, Iowa.
Thompson & Candler, Martin av., Detroit, Mich.
Thompson, T. C. & C., Birmingham, Ala.
Thresher, J. & Co., 164 Devonshire st., Boston, Mass.
Tice. B. I., Bethel, O.
Tibbetts. R., Portland, Me.
Tiffany Pressed Brick Co., 175 Dearborn st., Chicago, Ill.
Tigh & Williams, Montgomery, Ala.
Timoney, F., Verplanck, N. Y.
Tinnerman, H. J., Dayton, O.
Tippenhauer, G., Newport, Ky.
Toledo Brick Association, Toledo, O.
Toll & Ernest, Macon, Ga.
Torrens & Co., 66 3d av., Pittsburg, Pa.
Torrents, S. A., Macon, Ga.
Toovey, W., Denver, Col.
Towers, J., New Britain, Conn.
Townsend, T. B. & Co., Zanesville, O.
Tompkins, D. & Sons, Stony Point, N. Y.
Tompkins, S. & H. S., La Salle, N. Y.
Tompkins, W. S., Peekskill, N. Y.
Trago, B., Jackson, O.
Trampe. M., Defiance, O.
Travis, C., Verplanck. N. Y.
Tray, P., ft. E. 111th st., N. Y.
Trultt, J. C., Moorhead, Minn.
Tudor, D. C., 55 W. 4th st., Cincinnati, O.
Tudor & Bishop, Chicago, O.
Tully, T. & J. D., 161 La Salle st., Chicago, Ill.
Tuscumbia Brick & Construction Co., Tuscumbia, Ala.
Tuttle, G. L., Middletown, Conn.
Twogood, A. N., Albion, Mich.

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Union Press Brick Works, 411 Olive st., St. Louis, Mo.
U. S. Brick & Enameling Co., Croton Landing, N. Y.
Vanderhayden, W. H., Ionia, Mich.
Vangelder, T. J. & Co., Asheville, N. C.
Van Hoven, J., Front, bet. Roberts and Soniat sts., New Orleans, La.
Van Schoick & Rounds, Bloomington, Ill.
Van Scoy, A., Tallahassee, Fla.
Viney, W., Springfield, O.
Vinnedge, F. R. & Co., Hamilton, O.
Virginia Brick Co.. 916 F st., Washington, D. C.
Voelker, C., Columbus, O.
Vogt & Bowers, Shingle Creek, Minn.
Vondenbrink, R., McLean av., Cincinnati, O.
Vorster, E., 149 Griswold st., Detroit, Mich.
Voss, H., Vine st., n. Zoological Garden, Cincinnati, O.
Voyce, C., Light st. ext., Baltimore, Md.
Wade, G. N., Fremont Centre, Mich.
Wagner, A., Dearborn, Mich.
Wagner, J. G., Covington, O.
Wagner, W., Columbus, O.
Wagoner, M. V. B., Canal, c. Lake st., Albany, N. Y.
Wahl Bros., 238 Randolph st., Chicago, Ill.
Walden, L. L., Branchville, Conn.
Waldo Bros., 88 Water st., Boston, Mass.
Walker, W. T. & Co., 1105 C st., Washington, D. C.
Walker & Co., Manchester, Vt.
Walker & Son, Aurora, Ind.
Walsh Bros., New Windsor, N. Y.
Warburg, B. H., McLean av., Cincinnati, O.
Warburg H. & Son, McLean av., Cincinnati, O.
Ward, A. J., Flint, Mich.
Ward & Lee, Blakely, Minn.
Washburn Bros., ft. Jersey av., S. Cove st., Jersey City, N. J.
Washburn Bros., Glasco, N. Y.
Washburn, D. & Sons, 164 Devon. st., Boston, Mass.
Washburn, U. F., Haverstraw, N. Y.
Washburn & Barnes, 626 W. 30th st., N. Y.
Washington Brick Machine Co., 1420 N. Y. av., Wash'n, D. C.
Waterbury, J. & D., Schoarie, N. Y.
Waterman, C. R., Bloomfield, Conn.
Wayatt Brick Co., 2 Point st., Providence, R. I.
Weaver, J. T., Inka, Miss.
Weaver & Harman, 523 Columbia av., Balt., Md.
Weber, J., Jackson, n. Railroad sts., Louisville, Ky.
Webster, C. E. & A., Dark Run la., nr. Wissinoming st., Phila., Pa.
Webster, E. & Nephew, S. 30th, c. Tasker sts., Phila., Pa.
Webster, J., ½, nr. O sts., Wash'n, D. C.
Webster, T. T., Kensington av., c. Ontario st., Phila., Pa.
Wehr, F. & A., Fairmont av., c. Chester, st., Balt., Md.
Weidner, J., Lancaster, O.
Well, B., Marshal av., c. Cromwell st., Balt., Md.
Welthoff, W., Shingle Creek, Minn.
Welch & Keeger, Clarmont, N. H.
Wells Bros., Creston, O.
Welling, G. H., McLean av., Cincinnati, O.
Wells, J., Chattanooga, Tenn.
Wells & Brigham, Binghamton, N. Y.
Wensel, A. A., Bedford st., Pittsburgh, Pa.
Westernhouse, S., Wheeling, W. Va.
West Hartford Ice & Pressed Brick Co. (The), 29 Pearl st., Hartford, Conn.
Westlake, B., Horseheads, N. Y.
Westminster Brick Co., W. 58th st., c. Haverford av., Phila., Pa.
Weston, E. M. & Son, Jacksonville, Fla.
West, T., Manchester, Va.
West, W. H. & Bro., 9 Corcoran Bldg., Washington, D. C.
Westwood, W., Richmond, Va.
Weyant, H. & Co., Springfield, Mass.
Wharton, N. B., Caldwell, O.
Wheeler, W., Charlottesville, Va.
Wheeler & Howes, east end centre bridge, Bridgeport, Conn,
Whistle Bros., Cambridge, O.
White, J. H., Easton, Md.
White, R., Gordon av., Cleveland, O.
White & Ashcraft, Ironton, O.
Whittelsey & Brown, Alton, Ill.
Wiest, G., Chaska, Minn.
Wiggin, G. W., Exeter, N. H.
Wiggers, G., McLean av., Cincinnati, O.
Wilcox & Belden, Farmington, O.
Wilde, D , Cedar Falls, Iowa.
Wildenthaler, J., Galion, O.
Willard, F. A., Harvard, Mass.
Willard & Polchow, Mankato, Minn.
Williams Brick Co., Taunton, Mass.
Williams, G., Whitestown, N. Y.
Williams & Co,, Norfolk, Va.
Williams & Hess, Ottawa, Ill.
Williams, Wallace & Butts, Shawnee, O.
Willys & Hollis, Canajoharie, N. Y.
Wilsey, Wm., Deerfield, N. Y.
Wilson, J., Independence st., Cleveland, O.
Wilson, Gould & Durrough, Walnut Hills, O.
Wilson, Y. O. & Son, 1 N. Paca st., Balt., Md.
Wilt, W. W., York, Pa.
Winchester, B. F., Frederick, Md.
Winter, C., Independence st., Cleveland, O.
Winters & Johnson, Fremont, O.
Wiswall, T. G., Genesee, n. Lansing sts., West Troy, N. Y.
Wolf, C., 1412 E. Lombard st., Balt., Md.
Wolsey & Shafer, Batavia, N. Y.
Wood G., 624 W. 30th st., N. Y.
Wood, R. B., Wilmington, N. C.
Wood, W. H. & Bro., Martin's Ferry, O.
Wood & Keenan, Haverstraw, N. Y.
Woodley, C. B., Sioux City, Iowa.
Wren, V., Smithfield, Va.
Wright, J. F., Chattanooga, Tenn.
Wright & Kauff, Ætna st, Cleveland, O.
Wright & Dillenbaugh, Salem, O.
Wrisley, W. G., Windsor, Conn.
Wymond, P., Aurora, Ind.
Yankton Pressed Brick Co., Yankton, Dak.
Yeaton & Co., Rochester, N. H.
Yniestra, A. T , Pensacola, Fla.
Young, Arthur & Co., 54 Kilby st., Boston, Mass.
Young, C. A., Long la., n. Mifflin st., Phila., Pa.
Young, J. C., Batavia, O.
Young & Milnamow, S. 25th, c. Mifflin st., Phila., Pa.
Youngerman, C., Des Moines, Iowa.
Zimmerman, J., Flint, Mich.
Zoller, S., Marietta, O.
Zurheide, F., Sheboygan, Wis.

Bridge Builders.

Abbott Iron Works, P. O. Box 65, Balt., Md.
Adams, Rothwell & Co., St. Paul, Minn.
Albuquerque Bridge Co., Albuquerque, New Mexico.
Alden & Lassig Bridge & Iron Works, Leighton av., Rochester, N. Y.
Anderson & Barr, 240 Eleventh av., Jersey City, N. J.
Atlanta Bridge Works, Atlanta, Ga.
Bagley, C. H., Rutland, Vt.
Barber, E., Marseilles, Ill.
Baring Cross Bridge Co., Little Rock, Ark.
Barrett Bridge Co., Port Jervis, N. Y.
Beardsley, M. B., Bridgeport, Conn.
Berlin Iron Bridge Co., East Berlin, Conn.; Binghamton, N. Y.
Birmingham Bridge Co., Birmingham, Ala.
Bissitt, D., Mill, c. Elm st., Louisville, Ky.
Blake & Duffy, 517 W. 26th st., N. Y.
Bornemann, A., Lancaster, O.
Boston Bridge Works, D H. Andrews (prop.), 70 Kilby st., Boston, Mass.
Bookwalter, G., Amity, O.

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Boston, Chas., Burdens av., Detray st., Detroit, Mich.
Braun, Joseph, Columbus, O.
Briggs, W. C., Columbus, O.
Brown, A., 308 S. Ann st., Baltimore. Md.
Brown, C. O., Paterson, N. J.
Brown, E. G., Elizabeth, N. J.
Brown & Lucius, 171 B'way, N. Y.
Brown & Bro., Elizabeth st., Jersey City, N. J.
Brown & Whitney, 52 William st., N. Y.
Bruce, A., Marseilles, Ill.
Buckeye Bridge & Boiler Works, Hamilton st., Cleveland, O.
Butler, J., Somerville, Mass.
California Bridge Co., 22 California st., San Francisco, Cal.
Caldwell & Lane, Newark, O.
Carnegie, Phipps & Co., Pittsb'g, Pa.
Carroll, D. W. C. & Co., 310 Liberty st., Pittsb'g, Pa.
Cartter, M. S. & Co., 402 N. B'way, St. Louis, Mo.
Cartter, M. S. & Co., Palatki, Fla.
Cavanagh, G. H., 164 Devonshire st., Boston, M.
Central Iron & Steel Co., Brazil, Ind.
Chamberlin, J. V. & I. V., Delhi, O.
Champion Bridge Co., Wilmington, O,
Chester Rolling Mills, Thurlow, Pa.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Chicago Wrought Iron Works, 207 S. Canal st., Chicago, Ill.
Clark Bridge Co.. 7 South st., Balt., Md.
Clark, Reeves & Co., 410 Walnut st., Phila., Pa.
Cleveland Bridge & Car Works, Lake, c. Wasson st., Cleveland, O.
Cleveland Bridge & Iron Co., 121 Superior st., Cleveland, O.
Cofrode, D. S., 31 Montgomery st., Jersey City, N. J.
Cofrode D. S., 4027 Baring st., Phila., Pa.
Cofrode & Evans, Pottstown, Pa.
Cofrode & Saylor, 104 Hudson st., Jersey City, N. J.; Pottstown, Pa.; 257 S. 4th st., Phila., Pa.
Clow, N., Annapolis, Md.
Colburn, A. W. & Co., Northborough, Mass.
Cole, H. A., 35 Hawley st., Boston, Mass.
Columbia Bridge Co. (The), Dayton, O.
Coolidge, W. G. & Co., 115 Monroe st., Chicago, Ill.
Columbia Bridge Co. (The) (McHose & Lyon), Dayton, O.
Columbus Bridge Co., Columbus, O.
Connolly, R. A., 163 E. Randolph st. (Room 33), Chicago, Ill.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Danielson, G., Neenah, Wis.
Daniels, J. J., Rockville, Ind.
Dean & Westbrook, 32 Liberty st., N. Y.
Delaware Bridge Co., Trenton, N. J.
Derby, S. L., Lemont, Ill.
Derry, C. T. & Co., 68 Devonshire st., Boston, Mass.
Desparvis, N., Sioux City, Iowa.
Detroit Bridge & Iron Works, Foundry st. & M. C. R. R., Detroit, Mich.
Dominion Bridge Co., Montreal, Can.
Dominion Bridge Co. (Ltd.), Lachine, P. Q., and Toronto, Ont.
Diver, J. B. & Co., Keokuk, Ia.
Drolet, G. I., 8 North st., Hartford, Conn.
Du Bois, Henry & Sons, 119 South st., N. Y. 19.
Dubuque Bridge Co., Dubuque, Ia.
Dunleith & Dubuque Bridge Co., Dubuque, Ia.
Dupuis, A. J., 15 Atwater st., W., Detroit, Mich.
Durkee, E. E., Ashland, Wis.
Edge Moor Iron Co., Wilmington, Del.; 1600 Hamilton st., Phila., Pa.
Egbert, G., Metamora, Ill.
Eyre, John P. & Co., 450 Richmond st., Phila., Pa.
Filsinger, A., 164 Park st., Syracuse, N. Y.
Finley, David, 10 California st, San Francisco, Cal.
Flynt Building & Construction Co., Palmer, Mass.
Gates, J. & Co., 904 Olive st., St. Louis, Mo.
Gibson, R. W., 330 Walnut st., Phila., Pa.
Gillies, D. A., Frederick, c. Pratt sts., Balt., Md.
Glenn, B., 22 S. Chester st., Baltimore, Md.
Goodell & Waters, Phila., Pa.
Gottlieb, A. & Co., 149 La Salle st. (Room 75), Chicago, Ill.
Graves, C., New Lyme, O.
Groton Iron Bridge Co., Groton, N. Y.
Hallidie, A. S., 6 California st., San Francisco, Cal.
Hall, J. & Son, Black River Falls, Wis.
Hamilton, T. H., Toledo, O.
Hamilton Bridge Co., Hamilton, Ont.
Hamlin, A. J., Akron, O.
Harris, J., 164 Devonshire st., Boston, Mass.
Harris & Leversedge, Dallas, Texas.
Haviland, W., Columbus, O.
Hawkins, R. F., Iron Works, 200 Liberty st., Springfield, Mass.
Hawkins, R. F., Iron Works, 19 Pearl st., Boston, Mass.
Hayes, J. N. & Co., 35 Hawley st., Boston, Mass.
Headington, J. N., Mt. Vernon, O.
Hilton Bridge Construction Co., Albany, N. Y.
Hocking Valley Bridge Works, Lancaster, Ohio.
Hopkins Bridge Construction Co., 116 N. 4th st., St. Louis, Mo.
Hopkins, H. S., Bridge Co., 322 Pine st., St. Louis, Mo.
Horton, H. E., Rochester, Minn.
Howard, G. W., Marseilles, Ill.
Howe, E. F. Lincoln, Ill.
Hudson River Bridge Works, Hudson, N. Y.
Indiana Bridge Co., Muncie, Ind.
Iron City Bridge Works, 2007 Carson st., Pittsburgh, Pa.
Iron Substructure Co., Columbus, O.
Jarvis, M. E., Lemont, Ill.
Jones, G. P., Minneapolis, Minn.
Jones & Benner Co., 218 S. 4th st., Phila., Pa.
Jones & Hewitt, Minneapolis, Minn.
Kansas City Bridge & Iron Co., Kansas City, Mo.
Kelch, J., Pekin, Ill.
Kelly, Bernard & Son, 187 West st., Erie Bldg., N. Y.
Kellogg, C. H., 24 Erie st., Buffalo, N. Y.
Kenrick W. A. & Sons, 98 Cordor st., East Boston, Mass.
Keystone Bridge Co. (The), 205 La Salle st., Chicago, Ill.
Keystone Bridge Co. (The), 51st & Harrison sts., Pittsb'g, Pa.
King Iron Bridge & Mfg. Co., St. Clair & Wasson, sts., Cleveland, O.
King & Twiss, Des Moines, Iowa.
Kirkpatrick, J., Lincoln, Ill.
Lane, P. E., 177 La Salle st., Chicago. Ill.
Lappan, James & Co., 20 N. Penn av., Pittsb'g, Pa.
Lassig & Alden, 21 Met Block, Chicago, Ill.
Lassig, M., 1034 Clybourn av., Chicago Ill.,
Lawrence, N., Maysville, Wis.
Licking Iron Works, Covington, Ky.
Long, R., Iowa City, Iowa.
Lomas Bridge & Forge Works, 222 W. 2d st., Cincinnati, O.
Louisville Bridge & Iron Co., 11th, c. Oldham st., Louisville, Ky.
Lukens Rolling Mills, Coatesville, Pa.
Lynch, J. S., Sioux City, Iowa.
McCarty, J., Leavenworth, Kansas.
McClay, J. & Son, Hartford, Conn.
MacCormick, J., Albany, N. Y.
McHose & Lyon, Dayton, O.
Manhattan Bridge Building Co., 15 Broad st., N. Y.
Martin, H., Metamora, Ill.
Markley, A. S., Danville, Ill.
Marshall, J B., New Baltimore, N. Y.
Marsh, H., New Lyme, O,
Massillon Bridge Co., Massillon, O.
Miles, H. C., Galesburg, Ill.
Miller, C., Fond Du Lac, Wis.
Miller, H., Winchester, Ill.
Miller, R. L., 4th, c. Market st., St. Louis, Mo.
Milwaukee Bridge & Iron Works, 17th & Fowler sts., Milwaukee, Wis.
Missouri Valley Bridge & Iron Co., Leavenworth, Kansas.
Mitchell, Pollock & Co., Jackson, O.
Monks, John, 130 Water st., N. Y.

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Montgomery & Howard, Chelsea, Mass.
Morse Bridge Works, Hazelton, O.
Morse Bridge Co., Keokuk, Iowa.
Mosely Iron Bridge & Roof Co., 5 Dey st., N. Y.
Motherwell Iron & Steel Co., Logan, O.
Mount Vernon Bridge Co. (The), Mt. Vernon, O.
Nash, M. A., Fort Edward, N. Y.
Neveling & Co., 413 Locust st., Phila., Pa.
N J. Steel & Iron Co., 17 Burling sl., N. Y.
New Jersey Steel & Iron Co., Trenton, N. J.
N. Y. Stone Contracting Co., 113 E. 25th st., N. Y.
Niagara Bridge Works, Niagara st., c. Forest av., Buffalo, N. Y.
Niagara Falls & Clifton Suspension Bridge Co., Niagara Falls, N. Y.
Norton, W. A., 164 Devonshire st., Boston, Mass.
Novelty Iron Works, 3124 Market st., Phila., Pa.
Nunning & Lubbering, 254 W. Front st., Cincinnati, O.
Ohio Falls Iron Works, New Albany, Ill.
Olin, E. C., Galesburg, Ill.
Oliver, S. A. & Bro., Houston, Tex.
Ottawa, Waddington & N. Y. Railway & Bridge Co., 50 Exchange pl., N. Y.
Pacific Bridge Co., N. S. Berry, bet. 4th & 5th sts., San Francisco, Cal.
Passaic Rolling Mill Co., Paterson, N. J.; 45 B'way, N. Y.
Penna. Construction Co., 132 1st av., Pittsburg, Pa.
Penn & New England Construction Co., Bullitt Bldg., Phila., Pa.
Pencoyd Iron Works, 261 S. 4th st., Phila., Pa.
Penn Bridge Co., Beaver Falls, Pa.
Perkins, J. P., 256 Main st., Boston, Mass.
Phila. Bridge Works, 257 S. 4th st., Phila., Pa.
Phœnixville Bridge Works, 49 William st., N. Y.; 410 Walnut st., Phila., Pa.; Phœnixville, Pa.
Pittsburg Bridge Co., 36th st. & A. V. R. R., Pittsburgh, Pa.
Portage Lake Bridge Co., Grand Rapids, Mich.
Providence Pile Driving & Bridge Building Co., 564 Eddy st., Providence, R. I.
Providence Architectural Iron & Metal Works, 288 Dyer st., Providence, R. I.
Queen City Bridge & Forging Co., 17 Pike st., Cincinnati, O.
Queen City Bridge & Steam Forging Co., 177 E. Pearl st., Cincinnati, O.
Raymond Bros., 10 Washington st., New Haven, Conn.
Raymond & Campbell, Council Bluffs, Iowa.
Redfield, R. & Sons, 99 Church st., New Haven, Conn.
Richards, C. O. & Co., 15 Cortlandt st., N. Y.
Richardson, W. L., 14 Howard st., San Francisco, Cal.
Riter & Conley, 55-56 Water st., Pittsb'g, Pa.
Riverside Bridge & Iron Works, 18 B'way, N. Y.
Riverside Bridge Works, 171 B'way, N. Y.
Roebling's, J. A. Sons Co., 117 Liberty st., N. Y.
S.
Rochester Bridge & Iron Works, Rochester, N. Y.
Ross & Lord, 164 Devonshire st., Boston, Mass.
Ross & Sandford, 113 Hudson st., Jersey City, N. J.; 112 S. Gay st., Balt., Md.; Washington, D. C.
Rosevelt, Warren, 257 South st., N. Y.
Russell, H. S., Pittsfield, Mass.
Russell, H. G., Lincoln, Ill.
Rust & Alden, 1 Nat. Bank Bldg., Chicago, Ill.
San Francisco Bridge Co., 10 California st., San Francisco, Cal.
Sanders Bros., Ottawa, Ill.
St. Louis Bridge & Iron Works, 16 N. 4th st., St. Louis, Mo.
Scaife, Wm. B. & Sons, 119 1st av., Pittsb'g, Pa.
Shanley, B. M. & J. F., 16 Exchange pl., Jersey City, N. J.
Shaw, J., 35 Hawley st., Boston, Mass.
Sheldon, I. P., 27 Stewart st., San Francisco, Cal.
Sherwood, G. W. & Co., St. Paul, Minn.
Shipman, J. W., Tribune Bldg. (Room 59), N. Y.
Shiffler Bridge Works, 47th st., c. A. V. R. R., Pittsburg, Pa.
Sooysmith & Co., 2 Nassau st., N. Y.
Southern Bridge Works, Avondale, Ala.
Stacey Mfg. Co., 16 Ramsey st., Cincinnati, O.
Standard Roof & Bridge Co., 723 Richmond st., Phila., Pa.
Strickland, J., Glen St. Mary, Florida.
Stouffer, S., York, Pa.
Smith, Bridge Co., East Toledo, O.
Smith, C. Shaler, St. Louis, Mo.
Smith, Fredk. H., 227 E. German st., Balt., Md.
Smith, J. K., 292 Main st., Springfield, Mass.
Sullivan & Ehlers, 166 B'way, Albany, N. Y.
Swifts Iron & Steel Works, Newport, Ky.
Sykes, L. & Son, 725 Richmond st., Phila., Pa.
Teague, S., Portland, Me.
Thompson, T. McK., 14 Howard st., San Francisco, Cal.
Tredegar Iron Works, Richmond, Va.
Trumbull & Cheney, 209 Washington st., Boston, Mass.
Union Bridge Co., 1 Broadway, N. Y.; ft. Hamburg st., Buffalo, N. Y.; Athens, Pa.
Union Iron Mills, Pittsb'g, Pa.
Van Zile, McCormack & Co., B'way, c. Thacher st., Albany, N. Y.
Vermont Construction Co., St. Albans, Vt.
Vulcan Forge & Iron Works, Pittsb'g, Pa.
Waco Bridge Co., Waco, Texas.
Walker, J. W., 47 & A. V. R. R., Pittsb'g, Pa.
Walls, C. W., 54 Hermon st., Worcester, Mass.
Wallis Iron Works, 15 Morris st., Jersey City, N. J.; 95 Courtlandt st., N. Y.
Warden, Hy., Germantown, Phila., Pa.
Waterhouse, C. R. & Son., 40 Park st., New Haven, Conn.
Weaver, W. R. & Co., 14 N. Holliday st., Balt., Md.
Webster & Dustin, Lawrence, Mass.
Weinhagen, F., Milwaukee, Wis.
Wells & French Co., 138 E. Jackson st. (Room 206), Chicago, Ill.
Wentz & Purple, 52 B'way, N. Y.
Western Penn. Bridge Works, Pittsb'g, Pa.
Wheaton, W., South Seaville, N. J.
Whitcomb, F. G., 164 Devonshire st., Boston, Mass.
White, I. E., 28 Coentis sl., N. Y.
Wilkins, Post & Co., 102 B'way, N. Y.
Wilkins Post Co., Atlanta, Ga.
Williamson, T., Houston, Texas.
Wilson, Bros. & Co., 435 Chestnut st., Phila., Pa.
71.
Winslow, W. E., Indianapolis, Ind.
Wolf, Albert, H., 218 La Salle st. (room 722), Chicago, Ill.
Worden, Henry, Germantown Junc., Phila., Pa.
Wrought Iron Bridge Co., Canton, O.
Wundt & Martin, Burlington, Iowa.
Young, B., 35 Hawley st., Boston, Mass.

Brimstone.

Atlantic Sulphur Works, 119 Maiden la., N. Y.
Battette & Renwick, 163 Front st., N. Y.
Gray, Daniel H., 113 Maiden la., N. Y.

Brooms—Steel Sweeping.

Obermayer Foundry Supply Mfg. Co. (The S.), Cincinnati, O.

Bronze Founders—Ingots & Castings.

American Bronze Works, 46 and 48 Columbus st., Cleveland, O.
Atwood & McCaffrey, 60 3d av., Pittsb'g, Pa.
Bancroft, A., Montpelier, Vt.
Best, Fox & Co., 1st av., c. Ferry st., Pittsb'g, Pa.
Bostwick, W. S. & Co., 30 3d st., Pittsb'g, Pa.
Bureau Bros., 811-813 Fairmount av., Phila., Pa.
Carbon Bronze Co., 38 Water st., Pittsb'g, Pa.
Damascus Bronze Co., 4th st., c. Duquesne Way, Pittsb'g, Pa.
Grancy Bronze Co., Duquesne Way, n. 3d st., Pittsb'g, Pa.
Henry-Bonnard Bronze Co., 438 W. 16th st., N. Y.
Keystone Smelting Co. (Ltd.), 33d st. A. V. R. R. av., Pittsb'g, Pa.

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Merchant & Co., 9 Burling slip, N. Y.; 317 Arch st., Phila., Pa.
Metallic Art Co., 23 Eddy st., Providence, R. I.
Middelburg, C., 623-625 Commerce st., Phila., Pa.
Mowery & Phillips, 120-134 Cross st., Boston, Mass.
Muller's, Nicolas Sons, 117 Chambers st., N. Y.
Nimick & Brittan Mfg. Co., 411 Wood st., Pittsburgh, Pa.
Phila. Smelting Works, 455 N. 12th st., Phila., Pa.
Phosphor Bronze Smelting Co., Des Moines, Iowa.
Phosphor Bronze Smelting Co. (Ltd.) (The), 512 Arch st., Phila., Pa.
Power, Maurice J., 218 E. 25th st., N. Y.
Talmage & Weidley, 228 N. 15th st., Phila., Pa.
Western White Bronze Co., Des Moines, Iowa.
Williams, E. A. & Son, 109 Plymouth st., Jersey City, N. J. x.
Wilson, Snyder & Co., 52 Water st., Pittsb'g, Pa.

Bronze Powder.

American Bronze Powder Mfg. Co., 6 Murray st., N. Y.
Ansbacher, A. B. & Co., 139 Lake st., Chicago, Ill.
Arnstein, Eugene, 110 Dearborn st., Chicago, Ill.
Baker, W. H. & Co., 52 John st., N. Y.
Beck, Charles, 609 Chestnut st., Phila., Pa.
Biggs, F. D. & Co., 112 E. 14th st., N. Y.
Birkner, J., 139 William st., N. Y.
Brandeis, L. & Co., 133 William st., N. Y.
Canton Paint & Oil Co., Melrose, Mass.
Donald, W. C. & Co., 85 Water st., Boston, Mass.
Ehrmann, E., 54 La Salle st., Chicago, Ill.
Ehrmann, Ernest, 98 William st., N. Y.
Fuchs & Lang, 29 Warren st., N. Y.; 81 Dearborn st., Chicago, Ill.
Gerstendorfer, Bros., 17 Barclay st., N. Y.; 67 Lake st., Chicago, Ill.
Golding & Co., 183 Fort Hill sq., Boston, Mass.
Hamburger, C. W. & Co., 37 Frankfort st., N. Y.
Hastings & Co., 819 Filbert st., Phila., Pa.
Hemmerdinger, L. & Co., 210 Centre st., N. Y.
Hines, H. A. C., 104 Front st., N. Y.
Hoffman & Oehninger, 88 Read st., N. Y.
Hueter Bros. & Co., 2d, c. Market st., San Francisco, Cal.
Kallsen, C. F., 133 Clinton pl., N. Y.
Levy, S. T., 47 Warren st., N. Y.
Manhattan Bronze Powder Co., 66 N. 1st st., Brooklyn, N. Y.
Marder, Luse & Co., 139 Monroe st., Chicago, Ill.
Marsching, J. & Co., 27 Park pl., N. Y.
Martin, O. & Co., 130 N. 4th st., Phila., Pa.
Mayer, R. & Co., 27 Barclay st., N. Y.
Meier, George & Co., 135-137 William st., N. Y.
Okle, F. E., 233 Carter st., Phila., Pa.
Riessner, T., 58 Fulton st., N. Y.
Rosenfeld, L., 9 Murray st., N. Y.
Sartorius, A. & Co., 12 Barclay st., N. Y.
Schmelz, J. & Co., 17 Dey st., N. Y.
Schmidt, K. & Co., 44 College pl., N. Y.
Schultz & Co., 25 St. Marks pl., N. Y.
Shattuck, E. J. & Co., 520 Commercial st., San Francisco, Cal.
Smith, H. & Sons, 172 Fulton st., N. Y.
Sondheim, Alsberg & Co., 54 Malden la., N. Y.
Storrs, A. & Bement Co., 81 Franklin st., Boston, Mass.
Thatcher & Cabin, Cedar Grove, N. J.
Uffenheimer, A. J. & Co., 115 N. 4th st., Phila., Pa.
Ullman, Sigmund, 51 Malden la., N. Y.
Wadsworth, Howland & Co., 82-84 Washington st., Boston, Mass.
Wallon, L., 197 Pearl st., N. Y.
Weill, D., 172 Mercer st., N. Y.
Wheeler, Asahel, 145 Milk st., Boston, Mass.

Brownstone.

Brainerd Quarry Co. (The), Portland, Conn.
Connecticut Steam Brownstone Works (The), Portland, Conn.
Flynt Building & Construction Co., Palmer, Mass

Brushes and Brooms.

Bradley & Smith, 251 Pearl st., N. Y.
Brooklyn Ry. Supply Co. (The), 44 Walworth st., B'klyn, N. Y.
Coffin, Devoe & Co., 176 Randolph st., Chicago, Ill.
Herrick, Henry, Amsterdam, N. Y.
Hellwig, Maurice, 281 Pearl st., N. Y.
Ingraham Brush Works, Cleveland, O.
Rosenthal, H. & Bro., 120 Chambers st., N. Y.
Whiting, John L. & Son, High, c. Purchase sts., Boston, Mass.

Brushes—Air.

Air Brush Mfg. Co., 20 Nassau st., Rockford, Ill.

Brushes—Boiler Tube.

Paxson, J. W. & Co., 1021 N. Delaware av., Phila., Pa.

Brushes—Car Washing.

Bradley & Smith, 251 Pearl st., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.

Brushes—Horse.

Phœnix Steel Wire Broom & Brush Co., 199 E. Randolph st., Chicago, Ill.

Brushes—Machine Shop.

Obermayer Foundry Supply Mfg. Co. (The S.), Cincinnati, O.

Buckets—Fire, Etc.

Avery Elevator Bucket Co., Lake & Dart sts., Cleveland, O.
Bodke Mfg. Co. (The), Canonsburg, Pa.
Bonsfield & Co., Bay City, Mich.
Cattrall, Mfg Co., Cleveland, O.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Corthell, Nelson, Hingham, Mass.
Crawford, S. E., Norwalk, O.
Dickson Mfg Co., Scranton, Pa.
Easterbrook, Wm., 311 Cherry st., Phila., Pa.
Hennies, H. J., Columbia, S. C.
Hoyt, George, Stamford, Conn.
Iron Clad Mfg. Co., 22 Cliff st., N. Y.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. iii.
Litch, Thos. K. & Sons, Brookville, Pa.
Pearsons, S. W., West Charleston, Vt.
Rubber Clothing Co., 160 Congress st., Boston, Mass.
Shepard, Sidney & Co., 145-147 Seneca st., Buffalo, N. Y.
Stoner, L. D. & Son, Norwich, O.
Stiles & Co., 1590 Eastern av., Cincinnati, O.
Sunderman, John H. & Co., Quincy, Ill.
Union Indurated Fibre Co., 37 Barclay st., N. Y.; 39 Wabash av., Chicago, Ill.
Wood, Murray & Co., Cardington, O.

Buckets and Conveyers.

Abele, Chris, 253-255 W. 27th st., N. Y.
Avery Elevator Bucket Co., (The), Lake & Dart sts., Cleveland, O.
Beall Grinder Co., Decatur, Ill.
Borden, Sellick & Co., 92 Lake st., Chicago, Ill.
Budke Mfg. Co. (The), Canonsburg, Pa.
Cattrall Mfg. Co., Cleveland, O.
Clark, W. J. & Co., Salem, O.
Cross Mfg. Co., Fulton, N. Y.
Dickson Mfg. Co., Scranton, Pa.
Ebel, Charles, 90 Crosby st., N. Y.
Ehrsam, J. B., Machine Co., Enterprise, Kas.
Fisler, Chas. R., 257 29th st., Chicago, Ill.
Hayward, J. H., 11 Pine st., N. Y.
Hungerford Co. (The), 97 Park pl., N. Y.
Industrial Works, Bay City, Mich.
Iron Clad Mfg. Co., 22 Cliff st., N. Y.
Jeffrey Mfg. Co. (The), Columbus, O.

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Lane, G. W & C. A., Exeter, N. H.
Lechner Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. 111.
Link-Belt Machinery Co., 11-23 S. Jefferson st., Chicago, Ill.
McMyler Mfg. Co., 20 Main st., Cleveland, O.
Middlebrook Elevator Mfg. Co., 110 W. Larned st., Detroit, Mich.
Myer, Wm. P., 17-23 E. South st., Indianapolis, Ind.
Noye, John T, Mfg Co. (The), Buffalo, N. Y.
Roller Chain Belting Co., Columbus, O.
Ross, Charles, Jr., 31-33 S. 5th st., Brooklyn, E. D., N. Y.
Smith, J. F. & Co., 54 Merwin st, Cleveland, O.
Steubner & Woods, 168 E. 3d st., Long Island City, N. Y.
Stiles & Co., 1500 Eastern av., Cincinnati, O.
Thornburgh & Giessner, 18-22 N. Clinton st., Chicago, Ill.
Webster & Comstock, 125 Ontario st., Chicago, Ill.

Buffing, Dipping, Lacquering and Bronzing.

Cross, J. E., 115 B'way, N. Y.
Union Brass Mfg. Co., 115 B'way, N. Y., and Chicago, Ill.

Buoys.

Foster, J. M., 1 B'way, N. Y.
Kelsey, Horatio, Clinton, Conn.

Burlaps.

California Jute Mill Co., San Francisco, Cal.
Chelsea Jute Mills, 13th av., 24th and 25th sts., N. Y.
Grimond, J. & A. D., 49-51 Chambers st., N. Y.
Haynes, Lord & Co., 137 Duane st., N. Y.
Keokuk Bag Co., Keokuk, Iowa.
Lipman & Co., 39 Worth st., N. Y.
Ludlow Mfg. Co., 284 Devonshire st., Boston, M.
McGrath, James & Son, New Orleans, La.
Rogers, Gorham & Co., 20 Federal st., Boston, M.
Scott, James & Sons, 73 Leonard st., N. Y.
Watson, Peter, 1719 N. 10th st., Phila., Pa.
White, James F. & Co., 54-56 Worth st, N. Y.

Burning Brands.

Allen, James A., 244 Arch st., Phila., Pa.
Fowler, R. C., 538 3d st., Louisville, Ky.
Kaye & Co., 132 Water st, Louisville, Ky.
Lamphear, W. K., 22 Washington av., S. Minneapolis, Minn.
Matthews, J. D. & Son, 70 3d av., Pittsb'g, Pa.
Novelty Brass Foundry, 146 5th av., Louisville, Ky.
Schoolfield, R. J., 280 Pearl st., N. Y.
Sentis, Chas. G., 65 Fulton st., N. Y.
Spencer, Wm. W., 153 W. 5th st., Cincinnati, O.
Toledo Stamp & Stencil Works, 45 Summit st., Toledo, O.
Weber & Co., 54 5th av., Pittsburgh, Pa.
Western Brand & Stencil Works, 107-109 W. 2d st., Cincinnati, O.
Zaiser & Stegmann, 27 S. Meriden st., Indianapolis, Ind.

Burrs.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Ct.
Bridgeport Brass Co., Bridgeport, Conn.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Holmes, Booth & Haydens, Waterbury, Conn.
Upson Nut Co. (The), Unionville, Conn.
Waterbury Brass Co., Waterbury, Conn.

Butts.

Ætna Nut Co. (The), Southington, Conn.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Chicago Spring Butt Co., Chicago, Ill.
Clark Mfg. Co., Buffalo, N. Y.
Corbin, P. & F., New Britain, Conn.
Gilbert Lock Co. (The), 136-138 Front st., Newark, N. J.
Hancock, Ozro, Winchendon, Mass.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Conn.
McKinney Mfg. Co., Ridge, c. Rebecca st., Allegheny, Pa.
New England Butt Co., 31 Pearl st., Providence, R. I.
Nimick & Brittan Mfg. Co., 411 Wood st., Pittsburgh, Pa.
Osborn & Cheeseman Co., Ansonia, Conn.
Peck, Stow & Wilcox Co., Southington, Conn.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Sabin Machine Co., Montpelier, Vt.
Scovill Mfg. Co., Waterbury, Conn.; 423 Broome st., N. Y.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.
Stanley Works, New Britain, Conn.
Trenton Lock & Hardware Co., Trenton, N. J.
Union Mfg. Co., New Britain, Conn.
Wheeling Hinge Co., Wheeling, W. Va.

Buyers of Second Hand Ry. Material.

Logan, James H., Penn Bldg., Pittsb'g, Pa. 53.
Perkins, F. E. & Bro., 405 South st., N. Y.
Pope & Bro, Thos. J., 292 Pearl st., N. Y.
Robinson & Orr, 115 Water st., Pittsb'g, Pa. 72.
Sites, Wheeler & Co., 222 S. 3d st., Phila., Pa.
Walkley & Co., 10 Wall st., N. Y.

Cable Cord.

Johnston & Co., 3 Lispenard st., N. Y.

Cable Hangers.

Standard Underground Cable Co., 708 Penn av., Pittsb'g, Pa.

Cable Ry. Patents.

National Cable Ry. Co. (The), 140 Nassau st., N. Y.
Patent Cable Tramways Corporation (The) (Ltd.), 2 Victoria Mansions, Victoria st., S. W., London, Eng.
Rasmussen Cable Co., 1st National Bank Bldg., Chicago, Ill.

Cable Ry. Plants.

Hooven, Owens & Rentschler Co. (The), Hamilton, O.
Lane & Bodley Co. (The), 267-283 Water st., Cincinnati, O.
Poole & Hunt, 7 German st, Balt., Md.; Works at Woodberry, Md.
Walker, Mfg. Co., Cleveland, O.

Cable Ry. Work.

Hoefinghoff & Laue Foundry Co. (The), Cincinnati, O.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.

Cable Sheaves.

Hoefinghoff & Laue, Cincinnati, O.
St. Louis Malleable Iron Works, St. Louis, Mo.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.

Cable Yokes.

Baltimore Car Wheel Co. (The), Balt., Md.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hoefinghoff & Laue, Cincinnati, O.
Johnson Steel Street Rail Co. (The), Johnston, Pa. 55.
Keefer, Horace A. Co. (The), Kansas City, Mo. 88.
Metallic Street Ry. Supply Co., 37 State st., Albany, N. Y.
St. Louis Malleable Iron Works, St. Louis, Mo.

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Union Foundry & Pullman Car Wheel Works, Chicago, Ill.
Wharton, Jr., Wm. & Co. (Inc.), 25th st. & Washington av., Phila., Pa.

Cables—Aerial.

American Electrical Works, 67 Stewart st., Providence, R. I.
Greeley, E. S. & Co. (The), 5 Dey st., N. Y.
Standard Underground Cable Co., 91 5th av., Pittsb'g, Pa.; 18 Cortlandt st., N. Y.

Cables—Bridge.

Roebling's, John A. Sons Co., 117 Liberty st., N. Y. S.
Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.

Cables—Electric.

Am. Chain Cable Works, Troy, N. Y.
Am. Electrical Works, 67 Stewart st., Providence, R. I.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Benedict & Burnham Mfg. Co., Waterbury, Ct.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Day, A. G., 16 Dey st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Edison Machine Works, Schenectady, N. Y.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hotchkiss, Clark B., 16 Dey st., N. Y.
India Rubber & Gutta Percha Insulating Co., 159 Front st., N. Y.
Kelly, James F., 19 Dey st., N. Y.
Moore, Alfred F., 202 N. 3d st., Phila., Pa.
Morrison Wire Rope Co., Williamsport, Pa.
N. Y. Insulated Wire Co., 64 & 452 B'way, N. Y.; 11 Central st., Boston, Mass.
Okonite Co. (The), 13 Park Row, N. Y. Il.
Roebling's, John A., Sons Co., 117 Liberty st., N. Y. S.
Standard Underground Cable Co., 91 5th av., Pittsburg, Pa.; 18 Cortlandt st., N. Y.
Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.; Worcester, Mass.
Western Electric Co., 227-251 S. Clinton st., Chicago, Ill.

Cables—Electric Light.

Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Okonite Co. (The), 13 Park Row, N. Y. Il.
Standard Underground Cable Co., 91 5th av., Pittsburg, Pa.

Cables—Hollow.

Hollow Cable Mfg. Co., Hornellsville, N. Y.

Cables—Insulated.

American Electrical Works, Providence, R. I.
Bishop Gutta Percha Co., 426 E. 25th st., N. Y.
Bunnell & Co., J. H., 106 Liberty st., N. Y.
Campbell Electric Supply Co., 52 Fulton st., N. Y.
Callendor Insulating & Waterproofing Co., 45 B'way, N. Y.; Chicago, Boston.
Day, A. G., 16 Dey st., N. Y.
Eastern Electric Cable Co., 61 Hampshire st., Boston, Mass.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Habirshaw, Wm. M., 159 Front, st., N. Y.
Hotchkiss, Clark B., 16 Dey st., N. Y.
India Rubber & Gutta Percha Insulating Co., 159 Front st., N. Y.
Moore, Alfred F., 200 N. 3d st., Phila., Pa.
Okonite Co. (The), 13 Park Row, N. Y. Il.

Cables—Lead Cased.

Tatham & Bros., 226 S. 5th st., Phila, Pa.

Cables—Street Car.

Broderick & Bascom Rope Co., 704 N. Main st., St. Louis, Mo.
Bullivant & Co., 72 Mark Lane, London, E. C., England.
California Wire Works, 329 Market st., San Francisco, Cal.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hazard Mfg. Co., Wilkesbarre, Pa.
Howard, Childs & Co., Hamilton Bldg., Pittsb'g, Pa.
Johnson, Tom L., Indianapolis, Ind.
Morrison Wire Rope Co., Williamsport, Pa.
Post & Co., Cincinnati, O.
Roebling's Sons Co., John A., 117 Liberty st., N. Y. S.
Washburn & Moen Mfg. Co., Worcester, Mass.

Cables—Submarine.

Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Moore, Alfred F., 200 n. 3d st., Phila., Pa.
Okonite Co., 13 Park Row, N. Y. Il.
Standard Underground Cable Co., Penn Bldg., Pittsburg, Pa.

Cables—Telegraph.

Bishop Gutta Perch Co., 420 E. 25th st., N. Y.
Bunnell & Co., J. H., 106 Liberty st., N. Y.
Greeley & Co. E. S., 5-7 Dey st., N. Y.
Moore, Alfred F., 200 N. 3d st., Phila., Pa.
Okonite Co., 13 Park Row, N. Y. Il.
Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.

Cables—Telephone.

American Electrical Works, 67 Stewart st., Providence, R. I.
N. Y. Insulated Wire Co., 64-452 B'way, N. Y.
Okonite Co. (The), 13 Park Row, N. Y. Il.

Cables—Underground.

American Electrical Works, 67 Stewart st., Providence, R. I.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Okonite Co., 13 Park Row, N. Y. Il.
Standard Underground Cable Co., Penn Bldg. Pittsburgh, Pa.; 18 Cortlandt st., N. Y.

Calcium Lights.

Bent, Thos., 30 S. Market st. (Room 13), Chicago, Ill.
Brewer & Co., 758 Broad st., Newark, N. J.
Brooklyn Calcium Light Co., 515 Fulton st., Brooklyn, N. Y.
Caffrey, Murray & Wilson, 412 Bleecker st., N. Y.
Cincinnati Electric & Calcium Light Co., 365 Vine st., Cincinnati, O.
Eline, J. F. & Co., 206 E. Baltimore st., Balt., Md.
Gardner, G. A., 115 W. Fayette st., Balt., Md.
Gullery, Wm., 187 Mulberry st., N. Y.
Marsellus, J. & Co., Syracuse, N. Y.
Munnie, R., 623 Commerce st. Phila., Pa.
National Calcium Light Co., 187 Mulberry st., N. Y.
N. Y. Calcium Light Co., 412 Bleecker st., N. Y.; 333 Washington st., Boston, Mass.
Northwestern Calcium Light Co., 84 S. Market st. (room 5), Chicago, Ill.
Queen City Calcium Light Co., 35-37 W. Canal st., Cincinnati, O.
Ridley, A. E. & Co., 323 Front st., San Francisco, Cal.
St. Louis Calcium Light Co., 10 S. 6th st., St. Louis, Mo.
Truworthy, A. J., 2015 Leavenworth st., San Francisco, Cal.

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Unexcelled Fire W'ks Co. (The), 7-11 Park pl., N. Y.
Washington Calcium Light Co., 608 10th st., Washington, D. C.

Calipers & Dividers.

Bemis & Call Hardware & Tool Co., 14 Taylor st., Springfield, Mass.
Darling, Brown & Sharpe, Providence, R. I.
Davis Level & Tool Co., 30 Taylor st., Springfield, Mass.
Fay, Chas. P., Springfield, Mass.
Johnson, Wm., Newark, N. J.
Kraeuter & Co., Newark, N. J.
Lufkin, E. T., c. Lincoln av. & George st., Chicago, Ill.
McCoy & Sanders, 26 Warren st., N. Y.
Merchant & Co., 9 Burling st., N. Y.; 317 Arch st., Phila., Pa.
New England Specialty Co., North Easton, M's.
Richardson, C. F., Athol, Mass.
Sawyer, Chas. A. & Co., 134 Water st., Fitchburg, Mass.
Schollhorn, W. & Co., New Haven, Conn.
Starrett, L. S., Athol, Mass.
Stevens, J., Arms & Tool Co., Chicopee Falls, Mass.
Wilkinson, A. J. & Co., 184-188 Washington st., Boston, Mass.
Wright Machine Co., Worcester, Mass.

Canoes.

Carleton, Guy E., Oldtown, Me.
Rushton, J. H., Canton, N. Y
Trott, C., Kennebunkport, Me. **46.**

Cans—Oil, Waste & Trays.

Russell, Boynton & Co., 210 3d av., S. Minneapolis, Minn.
Whiting & Co., 468 Cherry st., N. Y.

Cans—Shipping.

Ball Bros., 10-32 Porter st., Buffalo, N. Y.
Case & Van Orman, Cleveland, O.
Croke, Daniel, Milwaukee, Wis.
Detroit Tinware Mfg. Co., Detroit, Mich.
Poole, C. P. & Co., 255 N. Front st., Phila, Pa.
Record Mfg. Co, Conneaut, O.
Shepard, Sidney & Co., Buffalo, N. Y.
Wilson, F. C. & Co., 239 Lake st., Chicago, Ill.

Canvas (Deck).

Asbestos Felting Works, 93 Maiden la., N. Y.
Brinckerhoff Turner & Co., 109 Duane st., N. Y.
Greenwoods Co., New Hartford, Conn.

Caps—Chimney.

Bakewell & Mullins, Salem, O.
Boston Terra-Cotta Co., 394 Federal st., Boston, Mass.
Chelmsford Foundry Co., 131 Portland st., Boston, Mass.

Caps—Driven Well.

Rouse, R. R., Indianapolis, Ind.

Capstans.

American Ship Windlass Co., Waterman & River sts., Providence, R. I. **xii.**
Butcher, J. A. & Co., 225 Atlantic av., Boston, Mass.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Dunbuar, J. A. & Co., Northville, Mich.
Edson Mfg. Co., 132 Commercial st., Boston, Mass.
Knowlton Bros., Camden, Me.
Manton Windlass & Steam Steerer Co. (The), Providence, R. I.
Providence Steam Engine Co., Providence, R. I.
Rogers, Chas., 72 Water st., Pittsb'g, Pa.
Rogers, Robert, 67 Water st., Pittsb'g, Pa.
Russell, A. & Sons, Newburyport, Mass.
Union Ship Windlass & Capstan Co., 241 Atlantic av., Boston, Mass.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.

Carbons—Electric Light.

Boulton Standard Carbon Co., Cleveland, O.
Brush Electric Co., Belden st., Cleveland, O.; 36 Union sq., N. Y.
Buffalo Electric Works, Buffalo, N. Y.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Cleveland Carbon Co., G. & P Track, S. of Cedar av., Cleveland, O.
Dickinson, John, 64 Nassau st., N. Y.
Electrical Supply Co., 38 La Salle st., Chicago, Ill.
Faraday Carbon Co., Pittsburgh, Pa.
Globe Carbon Co. (The), C. & P. R. R., n. Euclid av., Cleveland, O.
Holmes, Booth & Haydens, 25 Park pl., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
National Carbon Co. (The), Willson av. & L. S. M. S. R. R., Cleveland, O.
N. Y. Carbon Works, 39 Dey st., N. Y.
Parker-Russell Mining & Mfg. Co., 711 Pine st., N. Y.
Raynor, H. M., 28 Bond st., N. Y.
Richards, S. B., 55 S. 3d st., Phila., Pa.
Richmond Carbon Co., North Adams, Mass.
Solar Carbon & Mfg. Co., Phila., Pa.; 11th and Etna sts., Pittsburgh, Pa.
Standard Carbon Co. (The), Hamilton & C. & P. R. R., Cleveland, O.
Vitrite & Luminoid Co., Harrison, N. J.

Car-Box and Gearing.

Bemis Car Box Co., Springfield, Mass.
Baltimore Car Wheel Co., Baltimore, Md.
Chaplin Mfg. Co. (The), 142 Wall st., N. Y.
Dorner & Dutton, 14 Winter st., Cleveland, O.
Martin Rufus & Co., 114 Nassau st., N. Y. **52.**
Milmine & Co., H. B., Toledo, O.
Sidney, Shepard & Co., Buffalo, N. Y.
Whitney, A. & Sons, Phila., Pa.

Car Chairs (Parlor).

Monarch Palace Car Co., 315 Madison av., N. Y.
Scarritt Furniture Co., 611 N. 4th st., St. Louis, Mo.
Streater Reclining Car Seat Co., Chicago, Ill.

Car Chairs (Reclining).

Cross, J. E., 115 Broadway, N. Y.
Johnston Car Seat Co. (The), Chicago, Ill.
Scarritt Furnitnre Co., 611 N. 4th st., St. Louis, Mo.
Streater Reclining Car Seat Co., W. A. McKelvey, 234 Clark st., Chicago, Ill.
Union Brass Mfg. Co., 115 Broadway, N. Y., and Chicago, Ill.

Car Door Hangers.

Lane Bros., Poughkeepsie, N. Y.
Moore Mfg. Co., 51 Franklin st., Chicago, Ill.
Prescott Mfg. Co., 63 Oliver st., Boston, Mass.
Stearns, E. C. & Co., Syracuse, N. Y.
Terry Mfg. Co., Horsehead, N. Y.
Victor Mfg. Co., Newburyport, Mass.

Car Floor Racks.

Beadle, Edward, 1193 Broadway, N. Y. **73.**
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

Car Furnishings.

Dayton Mfg. Co. (The), Dayton, O.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Taylor, Woolfenden & Co., 165 Woodward av., Detroit, Mich.

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Car Lavatory Fittings.

Cross, J. E., 115 B'way, N. Y.
Union Brass Mfg. Co., 115 B'way, N. Y.; and Chicago, Ill.

Car Lighting Apparatus.

Chase, R. G., 71 Kilby st., Boston, Mass.
Electrical Accumulator Co. (The), 44 B'way, N.Y.
Julien Electric Co., 120 B'way, N. Y.
Pennock Railway Electric Light Co., 18 B'way, N. Y.
Pennock Underground Conduit & Surface Telegraph Co., 19 Whitehall st., N. Y.
Pintsch Lighting Co. (The), 45 B'way, N. Y.
Railway Lighting & Heating Co., 119 S 4th st., Phila., Pa.
Safety Car Heating & Lighting Co. (The), 160 B'way, N. Y.
Timlin & Herdinger, Belleville, Ill.

Car Movers.

Barnes Mfg. Co., C. I., 337 W. Monroe st., Chicago, Ill.
Dwight, E. P., 407 Library st., Phila., Pa.
Marsh & Co., S. P., 51 Fulton st., Boston, Mass.
Monarch Car Mover Co., 21 Duhl Block, Detroit, Mich.

Car Pushers.

Boston & Lockport Block Co., Lockport, N. Y. **20.**
Dwight, E. P., 407 Library st., Phila., Pa.

Car Replacers.

Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Pennsylvania Steel Co., Steelton, Pa.

Car Roofs.

Blount & Miller, Grand Rapids, Mich.
Chicago Car Roofing Co., 113 E. Adams st., Chicago, Ill.
Craddock, J. E. & Co., Harper av., n. Russell st., Detroit, Mich.
Danner, A. C., Mobile, Ala. **69.**
Drake & Weir, Cleveland, O.
Empire Car Roofing Co., E. Randolph pl., c. Market st., Chicago, Ill.
Hutchins, C. B. & Sons, 1 Moffat Bldg., Detroit, Mich.
Louisville Car Roofing Co., Louisville, Ky.
Lutcher & Moore, Orange, Tex. **51**
Mechling, H. C., 18 Cliff st., N. Y.
Mershon, Wm. B., East Saginaw, Mich. **67.**
National Car Roofing Co., 12 Cliff st., N. Y.; Wheeling, W. Va.; 125 Dearborn st. (Room 2), Chicago, Ill.
Paige Car Wheel Co., 211 Superior st., Cleveland, Ohio.
Woods, Jenks & Co., 5 Carter st., Cleveland, Ohio. **47.**

Car Sashes.

Ayers Patent Sash Holder Co., 242 Stewart Bldg., N. Y.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Dayton Mfg. Co. (The), Dayton, O.
Diederick, Z. P., Sherman, Texas.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Kuhlmann Car Co., 490 St. Clair st., Cleveland, Ohio.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Pugh & Russell, Stewart Bldg., N. Y.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.

Car Seals and Presses.

Brooks, E. J. & Co., 51 Dey st., N. Y.
Buffalo Seal and Press Co., 430 Niagara st., Buffalo, N. Y.
Hanson, C. H., 36-38 S. Clark st., Chicago, Ill.
Schofield, A. B., 170 Broadway, N. Y.
Standard Seal Co., 153 Broadway, Cincinnati, O.
Woodman, R., 60 High st., Boston, Mass.

Car Seat Springs.

American Pin Co., Waterbury, Conn.
Bushnell, E. L. & Sons, Poughkeepsie, N. Y.
Bushnell, E. L., Spring Co. (Ltd.), 267 Wabash av., Chicago, Ill.
Carey & Moen, 225-239 W. 28th st., N. Y.
Hale & Kilbarn Mfg. Co., 48 N. 6th st., Philadelphia, Pa.
Hartford Woven Wire Mattress Co. (The), Capitol av. and Laurel st., Hartford, Conn.
Onondaga Steel Works, Sweet's Mfg. Co., Syracuse, N. Y.
Tuthill Spring Co., Chicago, Ill.

Car Seats.

Buntin, Geo. & Co., 1042 Ridge av., Phila., Pa.
Clark, Geo. M. & Co., 157-159 Superior st., Chicago, Ill.
Cross, J. E., 115 Broadway, N. Y.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Foote, L. A., Lansing, Mich.
Gardner & Co., 643 W. 48th st., N. Y.
Gardner, Holmes & Co., 183 Canal st., N. Y.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hale & Kilburn Mfg. Co., 48 N. 6th st., Phila., Pa.
Hartford Woven Wire Mattress Co. (The), Capitol av. and Laurel st., Hartford, Conn.
Johnston Car Seat Co. (The), Chicago, Ill.
Kane, Thos. & Co., 137 Wabash av., Chicago, Ill. **28 & 29.**
Mason, C. C., Altoona, Pa.
Scarritt Furniture Co., 611 N. 4th st., St. Louis,
Streator Reclining Car Seat Co., Streator, Ill.
Union Brass Mfg. Co., 115 B'way, N. Y., and Chicago, Ill.

Car Seat Arm Caps.

Buntin & Co., Geo., 1042 Ridge av., Phila., Pa.
Dayton Malleable Iron Co., Dayton, O.

Car Seats—Perforated.

Frost & Peterson, 161 W. 18th st., N. Y.
Gardner, Holmes & Co., 206 Canal st., N. Y.
Gardner & Co., 643 W. 48th st., N. Y.
Kane, Thomas & Co., 139 Wabash av., Chicago, Ill. **28 & 29.**
Wakefield Rattan Co., 115 Washington st., Boston, Mass.

Car Seats—Plush.

Hale & Kilburn Mfg. Co., 48-50 N. 6th st., Phila., Pa.
Harlan & Hollingsworth Co., Wilmington, Del.
Hartford Woven Wire Mattress Co., Hartford, Conn.

Car Seats—Rattan.

Gardner, Holmes & Co., 183 Canal st., N. Y.
Hale & Kilburn, Mfg. Co., 48-50 N. 6th st., Phila., Pa.
Harlan & Hollingsworth Co., Wilmington, Del.
Hartford Woven Wire Mattress Co., Hartford, Conn.
Sinclair, F. A., Mottville, N. Y. **41.**
Wakefield Rattan Co., 115 Washington st., Boston, Mass.

Car Seats—Street Car.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Dayton Mfg. Co. (The), Dayton, O.
Diederick, Z. P., Sherman, Texas.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Frost & Peterson, 161 W. 18th st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Haddox, W. O., Louisville, Ky.
Hale & Kilburn Mfg. Co. (The), 48-50 N. 6th st., Phila., Pa.
Hartford Woven Wire Mattress Co. (The), P. O. Box, 363 Hartford, Conn.
Kuhlmann Car Co., 490 St. Clair st., Cleveland, Ohio.
Laelede Car Co., 4500 N. 2d st., St. Louis, Mo.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Purdy & Huntington Co. (Ltd.), 60 Shoe la., E. C., London, Eng.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Wakefield Rattan Co., Boston, Mass.

Car Seats—Striker Arms For

Hale & Kilburn Mfg. Co., 48 N. 6th st., Phila., Pa.

Car Seats—Woven Wire.

Hartford Woven Wire Mattress Co. (The), Hartford, Conn.

Car Shades and Rollers.

Gleason, E. P., Mfg. Co., 181 Mercer st., N. Y.
Hartshorn Roller Co., 486 B'way, N. Y.
Nevins & Haviland, 406 B'way, N. Y.
Sloane, W. & J., 19th st. & B'way, N. Y.

Car Sills.

Brookhaven Lumber & Mfg. Co., Brookhaven, Miss.
Danner, A. C., Mobile, Ala. **69.**
Fremont & Ryan, Atlanta, Ga.
Kaw Valley Lumber Co., 9th st. & B'way, Kansas City, Mo. **16.**
Lutcher & Moore, Orange, Tex. **51.**
Piedmont Lumber Co., Atlanta, Ga.
Ryan, Leon, I., Atlanta, Ga.
Smith, A. H. H. & Co., Toledo, O.
Strickland, F. P. & Co., Kansas City, Mo. **23.**
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65**
White, J. J., McComb City, Miss.
Woods, Jenks & Co., 5 Carter st., Cleveland, Ohio. **47.**
Youmans, T. J. & Co., Hazlehurst, Ga.

Car Springs—Rubber.

Akron Rubber Co., Akron, O.
Boston Belting Co., 260 Devonshire st., Boston, Mass.
Boston Car Spring Co., 19 Pearl st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Childs, H. L. & Co., 8 Smithfield st., Pittsb'g, Pa.
Cleveland Rubber Co., C. & P. & Nickle Plate R. R., Cleveland, O.
Donnelly, M. & Co., 134 Leroy st., N. Y.
Gutta Percha & Rubber Mfg. Co. (The), c. Warren & Church sts., N. Y.
Hoole Mfg. Co., 46 Bond st., N. Y.
Home Rubber Co., Trenton, N. J.
Kaldenberg, F. J. & Co., 371 B'way, N. Y.
New York Belting & Packing Co., 15 Park Row, N. Y. **v.**
Mercer Rubber Co., Trenton, N. J.
Star Rubber Co., Trenton, N. J.

Car Springs—Spiral and Elliptic.

Andrews, Frank H., 545 W. 33d st., N. Y.
Buffalo Spring & Gear Co., Buffalo, N. Y.
Cary & Moen, 234 W. 29th st., N. Y.
Chase Comb. Car Spring & Mfg. Co., 72 B'way, N. Y.
Chatillon, John & Sons, 85-87 Cliff st., N. Y.
Crescent Steel Works, Miller, Metcalf & Parkin, Pittsburgh, Pa.
Davis, A. B., Car Spring Co., 2305 Linn st., Phila., Pa.
Davis Spring Plate Co., Wilmington, Del.
Detroit Steel & Spring Works, Detroit, Mich.
Diamond State Car Spring Co., Wilmington, Del.; 413 Walnut st., Phila., Pa.
Farist Steel Co. (The), Bridgeport, Conn.
French, A., Spring Co., Ltd., (The), Pittsburgh, Pa.; Boreel Bldg., N. Y.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Hafner, John A., Pittsburgh, Pa.
Morgan Spring Co., 17 Lincoln st., Worcester, Mass.
National Car Spring Co., 13 Barclay st., N. Y.
Oxford Iron & Steel Works, Wm. & Harvey Rowland, Frankford, Phila., Pa.
Pickering Spring Co., Phila., Pa.
Pompton Steel & Iron Co., Pompton, N. J.
Rix Harrow Co., Kalamazoo, Mich.
Rowland, Wm. & Harvey, Frankford, Phila., Pa.
Scott, Charles, Spring Co., 1028 New Market st., Phila., Pa. **78.**
Whitten, Lascell, 13 State st., Lynn, Mass.

Car Springs—Steel.

Andrews, Frank H., 545 W. 33d st., N. Y.
Atkinson Car Spring Works, 189 La Salle st., Chicago, Ill.
Blun & Henius Mfg. Co. (The), Bridgeport, Conn.
Briner Bros., 54 Rutgers st., N. Y.
Cary & Moen, 234 W. 29th st., N. Y.
Chase Comb. Car Spring Mfg Co., 72 B'way, N.Y.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Crescent Steel Works, Pittsburgh, Pa.
Crown & Cumberland Steel Co., Hicks & Dickey, 413 Commerce st., Phila., Pa.
Davis Spring Plate Co., Wilmington, Del.
Diamond State Car Springs Co., Wilmington, Del.; 413 Walnut st., Phila., Pa.
Dunbar Bros., Bristol, Conn.
Farist Steel Co. (The), Bridgeport, Conn.
French, A., Spring Co. (The), 21st st. and Liberty av., Pittsb'g, Pa.; Boreel Bldg., N. Y.
Jacobus, E. T., Potter Bldg., N. Y.
La Belle Steel Works, Smith Bros. & Co., Pittsburgh, Pa.
Mercer Wire Co., 3d and Schenck sts., Trenton, N. J.
Miller & Van Winkle, 102 Walker st., N. Y.
Morgan Spring Co., Worcester, Mass.
National Car Spring Co., 13 Barclay st., N. Y.
National Wire Mattress Co., New Britain, Conn.
Penn & Lee, Canal, c. William st., Syracuse, N. Y.
Pittsburgh Steel Works, Anderson, Du Puy & Co., 107 Wood st., Pittsb'g, Pa.
Rowland, Wm. & Harvey, Frankford, Phila., Pa.
Scott Spring Co., Chas., 1028 New Market st., Phila., Pa. **78.**
Singer, Nimick & Co. (Ltd.), Pittsb'g, Pa. **3.**
Smith Bros. & Co., Pittsb'g, Pa.
Vose, Richard, 13 Barclay st., N. Y.

Car Springs—Street Ry.

Andrews, Frank H., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Baltimore, Md.
Bemis Car Box Co., Springfield, Mass.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Cliff & Righter, Oswego, N. Y.
Diamond State Car Spring Co., 8th st. and Railroad av., Wilmington, Del.; 413 Walnut st., Phila., Pa.
Foote, Orlo R., Cleveland, O.
French, A. A., Car Spring Co., Pittsb'g, Pa.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsb'g, Pa.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Pickering Spring Co. (Ltd.), Phila., Pa.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Stephenson, John, Co. (Ltd.), 47 E. 27th st., N.Y.
Street Ry. Supply Co., Cleveland, O.
Vose, Richard, 13 Barclay st., N. Y.

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Car Starters.

Baltimore Car Wheel Co. (The), Baltimore. Md.
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Post & Co., Cincinnati, O.
Wiser & Vail, 272 Pearl st., Cleveland, O.

Car Stops for Tracks.

Shaw, T., 915 Ridge av., Phila., Pa.

Car Trimmings—Cleaners and Replaters.

Cross, J. E., 115 Broadway, N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Union Brass Mfg. Co., 115 Broadway, N. Y., and Chicago, Ill.

Car Trusts.

Adams, Oliver, 32 Liberty st., N. Y.
Consolidated Rolling Stock Co., Edward Deacon, Sec'y, Bridgeport, Conn.

Car Warmers.

Baker & Smith Co., 81 E. Jackson st., Chic., Ill.

Car Wheel Boxes.

Bemis Car Box Co., Springfield, Mass.

Car Wheel Circumference Measurers.

Pedrich & Ayer, 1025 Hamilton st., Philadelphia, Pa. **60.**

Car Window Balance.

Gardner, O. K., P. O. Box 171, Pittsb'gh, Pa.

Car and Locomotive Springs Mfrs.

Akron Rubber Works, Akron, O.
Andrews, Frank H., 545 W. 33d st., N. Y.
Allison Mfg. Co., 32d and Walnut sts., Phila., Pa.
Atkinson Car Spring Works (The), 191 La Salle st. (Room 54), Chicago, Ill.
Betts Spring Co., San Francisco, Cal.
Boston Car Spring Co., 19 Pearl st., Boston, Mass.
Chicago Tyre & Spring Works, 94 E. Washington st. (Room 14). Chicago, Ill,
Cleveland Rolling Mills, Cleveland, O.
Cleveland Rubber Co., Cleveland, O.
Cleveland Spring Co., Cleveland, O.
Cliff & Righter Co. (Ltd.), 205 La Salle st. (Room 70), Chicago, Ill.
Columbia Car Spring Co., 23 Central av., Cincinnati, O.
Combination Roll and Rubber Co., 62 Astor House, N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Concave Spring Co. (The), 11 Pine st., N. Y.
Coughlin, B. J. & Co., Montreal, Canada.
Davis, A. B., Car Spring Co., 2305 Linn st., Philadelphia, Pa.
Davis Spring Plate Co., Wilmington, Del.
Detroit Steel and Spring Works, Michigan and Indiana avs., Detroit, Mich.; 138 E. Jackson st. (Room 415), Chic., Ill.
Diamond State Car Spring Co., Wilmington, Del.
Douglas, Geo., Bridgeport, Conn.
Empire Car Spring Co., 813 Jayne st., Phila., Pa.
Evans, John, 508 N. 15th st., Phila., Pa.
Farell, T. J., Fort Howard, Wis.
File & Spring Co., Montreal, Can.
Fowler, Josiah, St. Johns, N. B.
French, A., Spring Co., 138 E. Jackson st. (Room 408), Chicago, Ill.; and Pittsb'g, Pa.
French, Carlos, Seymour, Conn.
Gautier Steel Dept., Cambria Iron Co., Johnstown, Pa. **2.**
Globe Rubber Co., Trenton, N. J.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Hamilton Rubber Co., 131 Lake st., Chicago, Ill.; Trenton, N. J.
Harlan & Hollingsworth Co., Wilmington, Del.
Hebbard Car Spring Co., Knoxville, Tenn.
Home Rubber Co., Trenton, N. J.
Jeffries, Jas. & Sons, 813 Jayne st., Phila., Pa.
Kaldenberg, Fred'k J., 125 Fulton st., N. Y.
Keystone Car Spring Works, 249 W. 4th st., Cincinnati, O.
Liggett Spring & Axle Co., Pittsb'gh, Pa.
Mercer Rubber Co., box 247, Trenton, N. J.
Middleton, N. & A. & Co. (Ltd.), 187 Dearborn st. (Room 39), Chicago, Ill.; 945 Ridge av., Phila., Pa.
Miller, Metcalf, & Parkin, Pittsb'gh, Pa.
National Car Spring Co., 185 Dearborn st. (Room 118), Chicago, Ill.; 13 Barclay st., N. Y.
New Jersey Car Spring & Rubber Co., Jersey City, N. J.
N. Y. Belting & Packing Co., 15 Park Row, N. Y.

V.

Oxford Iron & Steel Works, Frankford, Pa.
Philadelphia Truss Co. (The), 610 Locust st., Phila., Pa.
Pickering, C. W. & Co., Phila., Pa.
Pittsburgh Steel Works, 107 Wood st., Pittsb'g, Pa,
Pompton Steel & Iron Co., Pompton, N. J.
Scott Spring Co., Chas., 1028 New Market st., Phila. Pa. **78.**
Singer, Nimick & Co. (Ltd.), Pittsb'g, Pa **3.**
Star Rubber Co., Trenton, N. J.
Trenton Rubber Works, Trenton, N. J.
Vose, Richard, 13 Barclay st., N. Y.
Wurster, F. W., 375 Kent av., Brooklyn, N. Y.

Carmine Manufacturers.

Sondheim Alsberg & Co., 54 Maiden la., N. Y.

Car Builders—Ambulance for Horses.

Brooklyn Railway Supply Co., 44 Walworth st., Brooklyn, N. Y.

Car Builders—Baggage, Mail and Hay.

Barney & Smith Mfg. Co., Dayton, O.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Jackson & Sharp Co., Wilmington, Del.
Kalamazoo R. R. Velocipede Co., Kalamazoo, Mich.
Pardee Car Works, Watsontown, Pa.
Scott, Irven W., Bridgewater, N. Y.

Car Builders—Construction and Track Laying.

Brooklyn Railway Supply Co. (The), 44 Walworth st. Brooklyn, N. Y.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.

Car Builders—Dump & Construction.

Billmeyer & Small Co., York, Pa.
Blaine Car Mfg. Co., Dayton, O.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Dickson Mfg. Co. (The), Scranton, Pa.
Goodwin, J. M., Sharpsville, Pa.
Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. **7.**
Knoxville Car Wheel Co., Knoxville, Tenn.
Litchfield Car & Machine Co., Litchfield, Ill.
McEwen, A. C. 79 Morgan st., Jersey City, N. J.
McMyler Mfg. Co., 180 Columbus st., Cleveland, Ohio.
Middleton, W. S., 52 John st., N. Y.
Mitchell & Lewis Co., Racine, Wis.
Steubner & Woods, 168 E. 3d st., Hunters Point, N. Y.
Whitman Agricultural Co., 3d st. & Clark av., St. Louis, Mo.

Car Builders—Electric.

Giants Causeway Electric Tramway, Antrim, Ireland.

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Car Builders—Freight, Stock, Etc.

Alabama Car Works, Anniston, Ala.
Allison, Mfg. Co., S. 32d, c.Walnut st., Phila., Pa.
Barney & Smith Mfg. Co., Dayton, O.
Billmeyer & Small Co., York, Pa.
Bradley & Sons, Osgood, Worcester, Mass.
Burton Stock Car Co., 194 Washington st., Boston, Mass.; 105 Royal Ins. Bldg., 169 E. Jackson st., Chicago, Ill.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Dauphin Car Works, Dauphin, Pa.
Ensign Mfg. Co. (The), Huntington, W. Va.
Erie Car Works (Ltd.), Erie, Pa.
Gilbert Car Mfg. Co., Troy, N. Y.
Greeley, E. S. & Co., 7 Dey st., N. Y.
Harlan & Hollingsworth Co. (The), Wilmington, Del.; 115 B'way, N. Y.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Haskell & Barker Car Co., 125 Dearborn st., Chicago, Ill.
Jackson & Sharp Co., Wilmington, Del.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Kansas City Car & Wheel Co., Beals' Bldg., Kansas City, Mo.
Lafayette Car Works, Lafayette, Ind.
Lebanon Mfg. Co., Lebanon, Pa.
Lehigh Valley Car Mfg. Co., Stemton, Pa.; 91 Liberty st., N. Y.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Litchfield Car & Machine Co., Litchfield, Ill.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
McKee, Fuller & Co., Catasauqua, Pa.
Mengis, M. C., 12 Broadway, N. Y.
Michigan Car Co., Detroit, Mich.
Middletown Car Works, Middletown, Pa.; York, Pa. **65.**
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
N. Y. Railway Supply Co., 40 Wall st., N. Y.
Ohio Falls Car Co., Jeffersonville, Ind.
Osgood, Bradley & Co., Worcester, Mass.
Pardee Car Works, Watertown, Pa.
Peninsular Car Co., Detroit, Mich.
Pennock Bros., Minerva, O.
Portland Co., Portland, Me.
Rathbun Co. (The), Deseronto, Ont.
Russell Wheel & Foundry Co., Detroit, Mich.
St. Charles Car Co., St. Charles, Mo.
Southern Car Works, Knoxville, Tenn.
Tredegar Iron Works, Richmond, Va.
Walkley & Co., 10 Wall st., N. Y.
Wason Mfg. Co., Springfield, Mass.
Wells & French Co., 138 Jackson st., Chicago, Ill.
Youngstown Car Mfg. Co., Youngstown, O.

Car Builders—Horse, Cable, &c.

Adams & Price Locomotive & Machine Works, 6 Vauxhall st., Nashville, Tenn.
Brill & Co., J. G., Phila., Pa.
Brooklyn Ry. Supply Co. (The), 44 Walworth st., B'klyn, N. Y.
Brownell & Wight Car Co., 2300 N. B'way, St. Louis, Mo.
Corey Car & Mfg. Co., 14 Metropolitan Block, Chicago, Ill.
Diederick, Z. P., Sherman, Tex.
Dick, Kerr & Co., 101 Leadenhall st., E. C. London, Eng.
Excelsior Foundry & Machine Works, Birmingham, Ala.
Falcom Engine & Car Works (Ltd.), Loughborough, Eng.
Feigel Car Co., 108 Wall st., N. Y.; New Utrecht, L. I.
Gilbert Car Mfg. Co., 3 Broad st., N. Y.
Haines Bros., 55 B'way, N. Y.
Harlan & Hollingsworth Co., Wilmington, Del., and 115 B'way, N. Y.
Iron Car Co., 115 B'way, N. Y.
Jackson & Sharp Co., Wilmington, Del.; 115 B'way, N. Y.
Jones, J. M. Sons, West Troy, N. Y.
Kuhlman Car Co., 490 St. Clair st., Cleveland, O.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
La Mothe Mfg. Co., 60 Liberty st., N. Y.
Lancaster Wagon Co. (The), (Ltd.), Lancaster, Eng.
Lehigh Valley Car Co., 91 Liberty st., N. Y.
Live Stock Car Equipment Co., 15 Broad st., N. Y.
Mann's Boudoir Car Co, 18 B'way, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Metropolitan Carriage & Wagon Works, Birmingham, Eng.
Monarch Palace Car Co., 315 Madison av., N. Y.
Newburyport Car Mfg. Co., Newburyport, Mass.
Pugh & Russell, Stewart Bldg., N. Y.; Chicago, Ill.
Pullman Palace Car Co., Chicago, Ill.: 15 Broad st., N. Y.; Pullman, Ill.; Detroit, Mich.
Robinson & Hitt, Waterloo, Iowa.
St. Louis Car Co., 2023 N. B'way, St. Louis, Mo.
Starbuck Car & Wagon Co. (The), (Ltd.), Birkenhead, Eng.
Stephenson, John Co. (Ltd.), 47 E 27th st., N. Y.
Terre Haute Car & Mfg. Co., Terre Haute, Ind.
U. S. Rolling Stock Co., 35 Wall st., N. Y.
Wagner Palace Car Co., Vanderbilt av., c. E. 44th st., N. Y.
Woodruff Sleeping & Parlor Coach Co., 115 B'way, N. Y.

Car Builders—Logging.

Butterworth & Lowe, Grand Rapids, Mich.
Lima Machine Works, Lima, O.
Richmond Locomotive & Machine Works, Richmond, Va. **12.**
Russell Wheel & Foundry Co., Detroit, Mich.
St. Charles Car Co., St. Charles, Mo.

Car Builders—Oil Tank.

Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Pollock, Wm. B. & Co., Youngstown, O.

Car Builders—Ore, Coal, Mine & Hand.

Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Allison Mfg. Co. (The), 32d and Walnut sts., Phila., Pa.
Billmeyer & Small Co., York, Pa.
Blake Bros. Mfg. Co., Haverhill, Mass.
Bradley & Sons, Osgood, Worcester, Mass.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Buda Foundry & Mfg. Co., Buda, Ill.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Clark, J. M., Howell, Mich.
Dickson Mfg. Co., Scranton, Pa.
Ensign Mfg. Co. (The), Huntington, W. Va.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Fraser & Chalmers, Union st., Chicago, Ill.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Jackson & Woodin Mfg. Co., Berwick, Pa.
Kalamazoo R. R. Velocipede Car Co., Kalamazoo, Mich.
Knickerbocker Ice Co., S. W. c. 6th and Arch sts., Phila., Pa.
Lafayette Car Works, Lafayette, Ind.
Lebanon Mfg. Co., Lebanon, Pa.
Lehigh Valley Car Co., Stemton, Pa.; 91 Liberty st., N. Y.
Lidgerwood Mfg. Co. (The), 96 Liberty st., N. Y. **111.**
Lima Machine Works, Lima, O.
Litchfield Car & Machine Co., Litchfield, Ill.
McKee, Fuller & Co., Catasauqua, Pa.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Middletown Car Works, Middletown, Pa.; York, Pa. **65.**
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Nelsonville Foundry & Machine Co., Nelsonville, O.
Pardee Car Works, Watsontown, Pa.
Peninsular Car Co., Detroit, Mich.
Pennock Bros., Minerva, O.
Rix & Firth, 12 Tremont st., San Francisco, Cal.
Russell Wheel & Foundry Co, Detroit, Mich.

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St. Charles Car Co., St. Charles, Mo.
Sharon Boiler Works, Sharon, Pa.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Southern Car Works, Knoxville, Tenn.
Steuben & Woods, 168 E. 3d st., Long Island City, N. Y.
Swartwout, L. B., Three Rivers, Mich. **18.**
Wason Mfg. Co., Springfield, Mass.
Work, L. P., Altoona, Pa.
Youngstown, Car Mfg. Co., Youngstown, O.

Cars—Parlor and Sleeping.

Gilbert Car Mfg. Co., Troy, N. Y.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Jackson & Sharp Co., Wilmington, Del.
Mann's Boudoir Car Co., 18 B'way, N. Y.
Monarch Palace Car Co., 315 Madison av., N. Y; 71 B'way, N. Y.
Pullman Palace Car Co., 15 Broad st., N. Y.
Wagner Palace Car Co., Vanderbilt av., c. E. 44th st., N. Y.
Woodruff Sleeping & Parlor Coach Co., 115 B'way, N. Y.

Car Builders—Passenger.

Allison Mfg. Co., S. 32d and Walnut st., Phila., Pa.
Barney & Smith Mfg. Co., Dayton, O.
Billmeyer & Small Co., York, Pa.
Bradley & Sons, Osgood, Worcester, Mass.
Brill & Co., J. G., Phila., Pa.
Ensign Mfg. Co. (The), Huntington, W. Va.
Gilbert Car Mfg. Co., Troy, N. Y.
Greeley, E. S. & Co., 7 Dey st., N. Y.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Haskell & Barker Car Co., 125 Dearborn st., Chicago, Ill.
Jackson & Sharp Co, Wilmington. Del.
Keefer, Horace A. S., Co., Kansas City, Mo. **88.**
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Litchfield Car & Machine Co., Litchfield, Ill.
Middletown Car Works, York, Pa. **65.**
N. Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
Ohio Falls Car Co., Jeffersonville, Ind.
Pennock Bros., Minerva, O.
Pierce, Chas. F., Chicago, Ill.
Pullman Palace Car Co., 15 Broad st., N. Y.
St. Charles Car Co., St. Charles, Mo.
Walkley & Co., 10 Wall st., N. Y.
Wason Mfg. Co., Springfield, Mass.

Cars—Private, Hotel and Excursion, to Lease.

Pullman Palace Car Co., Michigan av. & Adams st., Chicago, Ill; 15 Broad st., N. Y.
Worcester Excursion Car Co., Worcester, Mass. **18.**

Car Builders—R. R. Cars.

Alabama Car Works, Anniston, Ala.
Allison, John & Co., Hazleton, Pa.
Allison Mfg. (The), S. 32d, c. Walnut st., Phila, Pa.
Altoona Car Works, Altoona, Pa.
Atlanta Machine Works, Atlanta, Pa.
Barney & Smith Mfg. Co., Dayton, O.
Beaver Falls Car Works Co., Beaver Falls, Pa.
Billmeyer & Small Co. (The), York, Pa.
Bloomsburg Car Works, Bloomsburg, Pa.
Bothe, H. H., St. Louis, Mo.
Bradley Car Works, Worcester, Mass.
Bradley & Sons, Osgood, 21 Grafton st., Worcester, Mass.
Brill, J. G. Co., S. 31st, n. Chestnut st., Phila., Pa.
Brownell & Wight Car Co., 2300 N. B'way, St. Louis, Mo.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Buffalo Car Mfg. Co., Buffalo, N. Y.
Burton Stock Car Co., 112 E. Quincy st., Chicago, Ill.; 194 Washington st., Boston, Mass.
Campbell, M. G., 267 Clifton pl., B'klyn, N. Y.
Canton Car Co., Canton, O.
Capital City Car Works, Columbus, O.
Carey, Francis W. & Co., Chicago, Ill.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Carter Bros., 10 California st., San Francisco, Cal.
Chattanooga Car and Foundry Co., Chattanooga, Tenn.
Chicago and Northwestern Car and Locomotive Works, Moreland, Ill.
Clark, J. M., Howell, Mich.
Cobourg Car Works, Cobourg, Ont.
Cochnower, Perrine & Co., 8 Oliver st., Boston, Mass.
Connellsville Machine and Car Works, Connellsville, Pa.
Conshohocken Car Works, Conshohocken, Pa.
Corey Car Mfg. Co., 163 E. Randolph st. (Room 14), Chicago, Ill.
Crangle, E. J., Calais, Me.
Crossen, James Car Works, Cobourg, Ont.
Dallas Car and Agricultural Imp. Co., Dallas, Texas.
Dauphin Car Works, Dauphin, Pa.
Dawson Mfg. Co., Dawson, Ga.
Delaware Car Co., Wilmington, Del.
Detroit Car Co., 10 Butler Bldg., Detroit, Mich.
Ditson, Allen, Larned, Kansas.
Dure & Co., Wilmington, Del.
Eastern Rolling Stock Co., Lowell, Mass.
Eastman Freight Car Heater Co., 194 Washington st., Boston, Mass.
Elliott Car Co., Gadsden, Ala.
Empire Car Works, York, Pa.
Ensign Mfg. Co., Huntington, W. Va.
Erie Car Works, Erie, Pa.
Feigel Car Co., 108 Wall st., N. Y.; New Utrecht, L. I.
Georgia Car Co., Atlanta, Ga.
Gilbert Car Mfg. Co, 3 Broad st., N.Y.; Troy, N.Y.
Gilbert Car Works, Buffalo, N. Y.
Gill Car Mfg. Co., Columbus, O.
Glen Rock Mfg. Co., Glen Rock, Pa.
Hammond, J., 43 Beale st., San Francisco, Cal.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Harris, James & Co., St. Johns, N. B.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Haskell & Barker Car Co., Michigan City, Ind.; 125 Dearborn st., Chicago, Ill.
Hazleton Iron Works, Hazleton, Pa.
Humphreys & Sayce, 1 B'way, N. Y.
Huntingdon Car & Car Wheel Works, Huntingdon, Pa.
Indiana Car Co., Cambridge City, Ind.
Indiana Car Co., 204 N 3d st., St. Louis, Mo.
Indianapolis Car & Mfg. Co., Indianapolis, Ind.
Iron Bay Foundry, Marquette, Mich.
Iron Car Co. (The), 115 B'way, N. Y.
Iron Clad Mfg. Co., 22 Cliff st., N. Y.
Jackson & Sharp Co., Wilmington, Del.; 115 B'way, N. Y.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Jacksonville Car & Mfg. Co., Jacksonville, Ill.
Johnston, Adam & Son, Reading, Pa.
Jones Car Works, Schenectady, N. Y.
Jones, J. M. Sons, West Troy, N. Y.
Kalamazoo Railroad Velocipede Co., Kalamazoo, Mich.
Kansas City Car & Wheel Co., Kansas City, Mo.
Keene, W. H., Woodville, Pa.
Keith Mfg. Co., Sagamore, Mass.
Kiehlmann Car Co., Cleveland, O.
Kingston Car Works Co., Kingston, Ont.
Knorp, A. F., 120 Main st., San Francisco, Cal.
Knoxville Iron Co., Anniston, Ala.
Laclede Car Co., 2d, c. Douglas sts., St. Louis, Mo.
Laconia Car Co., Laconia, N. H.
La Duc, J., Montpelier, O.
La Fayette Car Works, La Fayette, Ind.
La Mothe Mfg. Co., 60 Liberty st., N. Y.
Lane & Bodley Co., Cincinnati, O.
Lebanon Mfg. Co., Lebanon, Pa.
Lehigh Car Mfg. Co., 60 Liberty st., N. Y.
Lehigh Car Mfg. Co, Stemton, Pa.
Lehigh Car, Wheel & Axle Works, McKee, Fuller & Co., Catasauqua, Pa.

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L'Hote & Co., New Orleans, La.
Lima Car Co., Lima, O.
Lima Car Works, Lafayette, Ind.
Litchfield Car & Machine Co., Litchfield, Ill.
Lockard, G. M. & J. K., Bloomsburg, Pa.
Lombard, Thomas, Augusta, Me.
Londonderry Car Works, Londonderry, N. C.
McEwen, A. C., 79 Morgan st., Jersey City, N. J.
Mann's Boudoir Car Co., 18 B'way, N. Y.
Mansfield, A. K. & Co., 280 B'way, N. Y.
Michigan Car Co., 1 Newberry st., Detroit, Mich. **94.**
Middletown Car Works, Schall & King, Middletown, Pa. **65.**
Milliken, Boyd & Co., Haselton, O.
Milton Car Works, Murray, Dougal & Co. (Ltd.), Milton, Pa.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
Monarch Parlor-sleeping Car Co., 315 Madison av., N. Y.
Morris, W. & Bro., Hazleton, Pa.
Motive Power Co., Littleton, New Hampshire.
Murray, Dougal & Co., Milton, Pa.
Muskegon Car Co., Muskegon, Mich.
National Car Co., St. Albans, Vermont.
North Carolina Car Co., Raleigh, N. C.
Northwestern Mfg. & Car Co., 20 N. Clark st., Chicago, Ill.; Stillwater, Minn.
O'Ferrell, John & Co., Piqua, O.
Ohio Falls Car Co., Jeffersonville, Ind.
Ontario Car & Foundry Co., London, Ont.
Pardee Car & Machine Works, Watsontown, Pa.
Patterson & Corbin, St. Catherines, Ont.
Peninsular Car Co., Detroit, Mich.
Pennock Bros., Minerva, O.
Pennsylvania Car Works, Ligonier, Pa.
Peteler, F., Minneapolis, Minn.
Phila. & Reading Coal & Iron Co., Pottsville, Pa.
Pierce, Chas. F., Chicago, Ill.
Pioneer Iron Works, Brooklyn, N. Y.
Pittsburgh Locomotive & Car Works, Pittsb'g, Pa.
Portland Co., Portland, Me.
Pugh & Russell, 138 E. Jackson st. (room 511), Chicago, Ill.
Pullman's Palace Car Co., Wilmington, Del.; 15 Broad st., N Y.; Pullman Bldg., Chicago, Ill.
Roanoke Machine Works, Roanoke, Va.
Robbins Cylindrical Steel Car Co., 52 Kilby st., Boston, Mass.
Robinson & Hitt, Waterloo, Iowa.
Robinson & Orr, Hamilton Bldg., Pittsburg, Pa. **72**
Rogers, C. B. & Co., Norwich, Conn.; 109 Liberty st, N. Y.
St. Charles Car Co., St, Charles, Mo.
Schall, M., York, Pa.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Snyder, G. W., Pottsville, Pa.
Soule, E., San Francisco, Col.
Southern Car Works, Knoxville, Tenn.
Southern States Coal, Iron & Land Co., South Pittsb'g, Tenn.
Steel, J. D. & Son, Mfg. Co., Pottstown, Pa.
Stephenson, John Co. (Ltd.), 47 E. 26th st., N. Y.
Steubner & Woods, Long Island City, N. Y.
Swissvale Car Co., Swissvale, Pa.
Terre Haute Car & Mfg. Co., Terre Haute, Ind.
Tiffany Refrigerator Car Co., 205 La Salle st. (Room 61), Chicago, Ill.
Tredegar Iron Co., Richmond, Va.
Turl's Iron Works, 534 W. 28th st., N. Y.
Union Car Coupler Co., 19 Congress st., Boston, Mass.
Union Car Works, Portsmouth, Va.
United States Rolling Stock Co. (The), 189 La Salle st., Chicago, Ill.; 10 Wall st., N. Y.; Hegewisch, Ill.; Urbana, O.
United States Tube Rolling Stock Co., 115 B'way, N. Y.
Wagner Palace Car Co., Buffalo, N. Y.; Vanderbilt av., c. 44th st, N. Y.
Wallen, Jr., H. D., Grand Rapids, Mich.
Wason Mfg. Co., Springfield, Mass.
Watt, J. H. & Bros., Barnesville, O.
Wells & French Co., 138 Jackson st., Chicago, Ill.
Woodruff Sleeping & Parlor Coach Co., 115 Broadway, N. Y.; 430 Walnut st., Phila., Pa.
Youngstown Car Mfg. Co., Youngstown, O.

Car Builders—Refrigerator.

Detroit Refrigerator Car Co., 1 Moffat Bldg., Detroit, Mich.
Digging, Jr., H. M., & Co., Cincinnati, O.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Kansas City Car & Wheel Co., Beals' Bldg, Kansas City, Mo.
Lafayette Car Works, Lafayette, Ind.
Lebanon Mfg. Co., Lebanon, Pa.
Michigan Car Co., Detroit, Mich. **94.**
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
St. Charles Car Co., St. Charles, Mo.
Tiffany Refrigerator Car Co., 205 La Salle st., Chicago, Ill.
Wason Mfg. Co., Springfield, Mass.
Wickes Refrigerator Co., 205 La Salle st., Chicago, Ill.; Rochester, N. Y.

Cars—Velocipede R. R.

Clark, Josiah M., Howell, Mich.
Fairbanks, Morse & Co., Lake & La Salle sts., Chicago, Ill.
Fairbanks & Co., 26 S. Meridian st., Indianapolis, Ind.
Kalamazoo Railroad Velocipede Car Co., Kalamazoo, Mich.
Sheffield Velocipede Car Co., Three Rivers, Mich.

Car Builders—Wrecking & Derrick.

Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Dickson Mfg. Co., Scranton, Pa.
Industrial Works, Bay City, ich.
McMyler Mfg. Co., 180 Columbus st., Cleveland, Ohio.
Marion Steam Shovel Co., Marion, O.
Osgood Dredge Co., 37 State st., Albany, N. Y.
Souther & Co., John, Boston, Mass.
Toledo Foundry & Machine Co., Toledo, O.

Cars—Second Hand.

Brill, J. G., Co., Phila., Pa.
Brooklyn Ry. Supply Co. (The), 44 Walworth st., B'klyn, N. Y.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Buss & Norton, 138 Jackson st., Chicago, Ill.
Carey, Geo. H., 1 B'way, N. Y.
Delafield Tallmadge, 95 Liberty st., N. Y.
Greeley, E. S. & Co. (The), 5 & 7 Dey st., N. Y.
Haines Bros., 55 B'way, N. Y.
Humphreys & Sayce, 1 B'way, N. Y.
Leavitt, C. W. & Co., 161 B'way, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Mengis, M. C., 12 B'way, N. Y.
Middleton, W. S., 52 John st., N. Y.
N. Y. Equipment Co. (The), 10 Wall st., N. Y. **95.**
N. Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Saxton, J. C., 52 B'way, N. Y.
Walkley & Co., 10 Wall st., N. Y.

Carts—Dump.

Bodley Bros., New Orleans, La.
Broderick, John, 449 Main st., Louisville, Ky.
Cullers, W. H., 14 Fayette st., Pittsb'g, Pa.
Kilbourne & Jacobs Mfg. Co. (The), 22 E. Broad st., Columbus, O. **2.**
Milburn Wagon Co., Toledo, O.
Mitchell & Lewis Co. (Ltd.), Racine, Wis.

Carvers—Wood.

Allard, H., 181 Everett st., Cincinnati, O.
Anderhub, A., 1 Morris & Essex R. R. av., Newark, N. J.
Anderson, J. W., 232 South st., N. Y.
Anderson, P. C., 108 W. Main st., Rochester, N. Y.

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Backmann, H. G., 120 N. 6th st., Phila., Pa.
Baird, T., 616 N. Calvert st., Balt., Md.
Banta, J. W., 1368 B'way, N. Y.
Behan, J. E., 271 Magazine st., New Orleans, La.
Betz, C., 20 Broome st., Newark, N. J.
Bob, J. P., 222 Magazine st., New Orleans, La.
Bragdon, J. C., 80 4th av., Pittsb'g, Pa.
Braun, C., 88 Diamond st., Pittsb'g, Pa.
Brinkerhoff, A. J., 257 W. 27th st., N. Y.
Brown, C., 20 James sl., N. Y.
Brown, J., 717 Sansom st., Phila., Pa.
Brown, O. L., 105 Dorance st., Providence, R. I.
Brown, W. H., 685 E. 153d st., N. Y.
Bryant, J., 217 Spear st., San Francisco, Cal.
Buddemeyer, W. & Co., 1st av., c. Short st., Pittsburgh, Pa.
Buerkel, J., 115 Hunt st., Cincinnati, O.
Callanan, R., 702 Covington st., Balt., Md.
Coburn, D., 5 M. & E. R. R. pl., Newark, N. J.
Conlan, P. T., 3 Bristol st., Boston, Mass.
Connor, W. M., 121 Dock st., Phila., Pa.
Counce, R. H., Thomaston, Me.
Dean, T., 225 S. 2d st., Phila., Pa.
De Zouche, L. H., 451 Fulton st., Troy, N. Y.
Dowler, C., 45 Eddy st., Providence, R. I.
Dowler, Henry, 94 Kingston st., Boston, Mass.
Dulley, J. J., 409 River st., Troy, N. Y.
Dux, Jos., S. Clark st., Chicago, Ill.
Eckenroth, Francis, 814-816 5th st., N. Y.
Eddy, B. F., 39 N. Bennett st., Boston, Mass.
Emanuel, C., 58 Thayer st., Boston, Mass.
Evans & Tombs, Huntington av. Bridge, Boston, Mass.
Frost, W. E. Mfg. Co., S. Canal, c. W. 12th st., Chicago, Ill.
Fry, H. L., 70 W. 4th st., Cincinnati, O.
Gilbert, J., Laconia, N. H.
Glidden, J. A., Dover, N. H.
Gompert, F. O., 32 Ganesvoort st., N. Y.
Grill & Knockel, 205 President st., Balt., Md.
Grubenbecher, Henry, 159 Ludlow st., N. Y.
Gunning, W., 180 Centre st., N. Y.
Guyot, S. A., 43 Bristol st., Boston, Mass.
Hall, H. J., 125 Tremont st., Boston, Mass.
Hall Mfg. Co., Ogden st., c. 4th av, Newark, N. J.
Hargmoser, J., 15 Miami st., Detroit, Mich.
Hastings & Gleason, 51 Commercial st., Boston, Mass.
Heckman, F., 220 16th st., San Francisco, Cal.
Hedden, V. G. & Son, Ogden, c. Orange st., Newark, N. J.
Heidenreich & Stephan, 223 Erie st., Cleveland, Ohio.
Heyneman, H., 58 7th av., Pittsb'g, Pa.
Hickey, T. L., 2 Wareham st., Boston, Mass.
Higginson, M. W., 1345 B'way, N. Y.
Hobbs, J. E., 27 Cornhill, Boston, Mass.
Hoffmann, C. S., 308 Mission st., San Francisco, Cal.
Hook, G., 42 New Bowery, N. Y.
Howard, O. D., 64 Clinton av, Buffalo, N. Y.
Howe, H., 133 Sheldon st., Hartford, Conn.
Ingalls, C. A., Hoboken, N. J.
Kalffer, F., 157 Wooster st., N. Y.
Keenan, W. A., 567 Main st., Buffalo, N. Y.
Kemp, J. & Co., 114 Mission st., San Francisco, Cal.
Kett, J. F., 2046 Marshall st., Phila., Pa.
King, W., M. & E. R. R. av., c. Plane st., Newark, N. J.
Knoblaugh Bros., 8th, n. Evans st., Cincinnati, Ohio.
Koch & Decker, McKibbin, c. Lorimer st., Brooklyn, N. Y.
Koprina, E., 247 N. Wells st., Chicago, Ill.
Kosack, F. W., 1007 B st., Washington, D. C.
Krause, O., 160 Dock st., Phila., Pa.
Kronauge, W., 33 Oehler st., Cincinnati, O.
Lane, H. H., 102 Water st., New Haven, Conn.
La Porte, L. A., 586 W. 6th st., Cincinnati, O.
Lasser, S., 4420 Lackawanna st., Phila., Pa.
Lees, A., 40 Sudbury st., Boston, Mass.
Linder, Hy., 1 Gt. Jones st., N. Y.
Litchfield, E., 904 Albany st., Boston, Mass.
Lovejoy, E. B., 20 Stewart st., San Francisco, Cal.
Lyons, J. J., 1 V Block, Waltham st., Boston, Mass.
McKinnie, M., 34 Spear st., San Francisco, Cal.
Mack, T., 13 N. Union st., Chicago, Ill.
Maher, E., 475 Tremont st., Detroit, Mich.
Martens, J. F., 170 Race st., Cincinnati, O.
Mischler, M., 19 Wareham st., Boston, Mass.
Morlock & Bayer, 102 Dorance st., Providence, R. I.
Murtha & Kuntz, 128 N. 2d st., Brooklyn, N. Y.
Nason, T. S., Newport, R. I.
Neabaurer, G. W., Bristol, Conn.
N. E. Decorating Machine Co., 632 Harrison av., Boston, Mass.
Nicholson, W. H., 1810 W. Lomard st., Balt., Md.
Nickel, H., 253 W. Houston st., N. Y.
North, J. S., 188 Canal st., N. Y.
O'Conor, G., 510 W. 35th st., N. Y.
Osebold, A., 366 Division st., Detroit, Mich.
Perry, Peter A., 252 Main st., Hartford, Conn.
Phillips, F., 1125 Callowhill st., Phila., Pa.
Piantini & Donzelli, 606 8th av., N. Y.
Prall, A. A., 513 Elm st., St. Louis, Mo.
Primus, J. A., 1627 Franklin av., St. Louis, Mo.
Robb, S. A., 195 Canal st., N. Y.
Roda, E. & Co., 34 River st., Rochester, N. Y.
Remde, A., 120 Main st., Cincinnati, O.
Saile, A. E., 47 University pl., N. Y.
Sailor, S., 128 S. 2d st., Phila., Pa.
St. John Wood Working Co., Canal Dock, Stamford, Conn.
Seavy, T. & Son, Bangor, Me.
Seibert, P., 1227 N. 8th st., St. Louis, Mo.
Seltman, C., 713 8th st., Washington, D. C.
Setcer, L. K., 248 McDougal st., Brooklyn, N. Y.
Schappert, H., 751 E. 164th st., N. Y.
Schmid, G., 431 Reese, Sandusky, O.
Schneider & Pachtmann, 234 Carters st., Phila., Pa.
Schroeder, F. & H., Linn, c. Betts st., Cincinnati, Ohio.
Schrumpf, F., 362 Centre av., Chicago, Ill.
Schubert, G., 257 Vine st., Cincinnati, Ohio.
Scorer & Ham, 55 Federal, Troy, N. Y.
Shoch, R. T., 4737 Lackawanna st., Phila., Pa.
Sorrento Wood Carving Co., 163 Tremont st., Boston, Mass.
Southworth, W., New Castle, Me.
Spurr, Chas. W., Co., 35 Bedford st., Boston, Mass.
Stewart, W., 129 S. 37th st., Phila., Pa.
Stoppelkamp, J., 1730 S. 9th st., St. Louis, Mo.
Strahan & Foster, 292 State st., Chicago, Ill.
Strickland & Shea, 133 Sheldon st., Hartford, Conn.
Sudsburg, J. M., 106 Park av., Balt., Md.
Suter, F., 42 S. St. Paul st., Rochester, N. Y.
Talen, W. A., 284 Magazine st., New Orleans, La.
Tebbets, T. L., Dover, N. H.
Thomas, C. C. T., Worcester, Mass.
Tryon, E., 134 Goerck st., N. Y.
Uhle, H., 211 Levant st., Phila., Pa.,
Van Wynen Bros., 18 Bergen st., Brooklyn, N. Y.
Vanzile, G., 580 Hudson st., N. Y.
Verrill, J. E., Rockland, Me.
Wagner & Reuther, 32 Farrar st, Detroit, Mich.
Warren, J. L., 53 Beale st., San Francisco, Cal.
Webb, F. M., 88 S. 3d st., B'klyn, N. Y.
Werner, W., 82 Schermerhorn st., B'klyn, N. Y.
Werthmuller, Henry, 1601 N. 8th st., St. Louis, Mo.
Westworth, J., 91 Park pl., Buffalo, N. Y.
White Bros, 52 Bluxome st, San Francisco, Cal.
Willgohs, H., 258 W. 28th st., N. Y.
Williams, A. J., 874 B'way, Albany, N. Y.
Wilson, J. W. & A., Newburyport, Mass.
Wirsching Bros., 175 Front st., Rochester, N. Y.
Wolters, 2929 N. 20th st., St. Louis, Mo.
Woodrich, H. F., 212 Centre st., N. Y.
Yager, J. B., 919 E. Lombard st., Balt., Md.
Zumstein, M., Akron, O.

Castings—Brass and Bronze Ry.

Allison Mfg. Co. (The), Phila., Pa.
Atlas Bronze & Tuyere Co., 2829 Smallman st., Pittsb'g, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Baxter, Robert, 180 Larned st., Detroit, Mich.

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Bridgeport Brass Co., Bridgeport, Conn.
Buck & Co. M. M., 209 N. 3d st , St. Louis, Mo.
Buffalo Hardware Co., Swan st., Buffalo, N. Y.
Cadman, A. W. & Co., 63 Water st., Pittsb'g, Pa.
Carbon Bronze Co., 38 Water st., Pittsb'g, Pa.
Cramp, B. H. & H., Phila., Pa.
Crown Smelting Co., Chester, Pa.
Dayton Mfg. Co. (The), Dayton, O.
Dickson, C. H., St. Louis. Mo.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Eagle Brass Works, Louisville, Ky.
Ensign Mfg. Co., Huntington, W. Va.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Hardoin, N. & Co., Lafayette & Brush sts., Detroit, Mich.
Haughton, N , Huron, n. Lafayette st., Toledo, Ohio.
Hinkley Locomotive Co., Boston, Mass. **62.**
Humphrey's Foundry, Bellefontaine, O.
Hurlbut Mfg. Co., Racine Junction, Wis.
Illinois Malleable Iron Co., 581 Diversey av., Chicago, Ill.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Jones, C. E. & Bro., Cincinnati, O. **78.**
Litchfield Car & Machine Co., Litchfield, Ill.
Mansfield & Co., 57 1st av., Pittsburgh, Pa.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo. **94.**
North Bros. & Co., 230 Race st., Phila., Pa.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Phosphor Bronze Smelting Co., Phila., Pa.
Pioneer Brass Works, 112 S. Penn st., Indianapolis, Ind.
Racine Hardware Mfg. Co., Racine, Wis.
Racine Malleable & Wrought Iron Co. (The), Racine, Wis.
Randle, John E. & Co., Memphis, Tenn.
Reilly, James, 230 West st., N. Y.
Richmond Bronze & Brass Works, Richmond, Va.
Richmond Locomotive and Machine Works, Richmond, Va. **12.**
St. Paul Brass Works, 8th and Minnesota sts., St. Paul, Minn.
Scrainage Brass & Cock Co., 77 Travers st., Boston, Mass.
Shelton Brass Hardware Co. (The), Birmingham, Conn.
Spencer's, I. S. Sons, Guilford, Conn.
Springfield Foundry Co., 99 W. Liberty st., Springfield, Mass.
Stewart & Mattson Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Thayer Mfg. Co., 241 Greenfield av., Milwaukee, Wis.
Theberath, Chas. M , 10 Ward st., Newark, N. J. **56.**
Van Dusen & Tift, 102 E. 2d st., Cincinnati, O. **57.**
Wentworth Mfg. Co., 92 Pearl st., N. Y.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. **x.**
Wilson, J B. & Co., Woodbridge & 13th sts., Detroit, Mich.
Wolverine Bronze Works, 66 Fort st., E., Detroit, Mich.
Wright, Wm., Newburgh, N. Y.
Yoe, Henry & Co., Fort & Beaubien sts., Detroit, Mich.

Castings—Bridge.

Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Ensign Mfg. Co. (The), Huntington, W. Va.
Mowry Car Wheel Works, Cincinnati, O.

Castings—Railway Cable.

Eureka Foundry Co., Gest st., Cincinnati, O.
Hoefinhoff & Laue, Cincinnati, O.
Horace A. Keefer Co (The), Kansas City, Mo. **88**
Lane & Bodley Co. (The), 257-283 Water st., Cincinnati, O.
St. Louis Malleable Iron Works, St. Louis, Mo

Castings—Car.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Andrews, Frank H., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.,
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Craig, Wm. P., 95 Liberty st., N. Y,
Diederick, Z. P., Sherman, Texas.
Dayton Malleable Iron Co., Dayton, O.
Ensign Mfg. Co., Huntington, W. Va.
Fisher, John J., Allentown, Pa.; 91 Liberty st., N. Y.
Fulton Foundry, Cleveland, O.
Howard, Childs, & Co., Hamilton Bldg., Pittsburgh, Pa.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Snead & Bibb, Louisville, Ky.
Street Ry. Supply Co., Cleveland, O.
Wharton, Wm., Jr., & Co. (Inc.), 25th st. & Washington av., Phila., Pa.
Whiting Mfg. Co., Cedar Rapids, Ia.
Whitney, A. & Sons, Phila., Pa.

Castings—Street Car.

Ayres, Abraham, 502-518 W. 45th st., N. Y.
Kaestner, Chas. & Co., 308 S. Canal st., Chicago, Ill.
Keystone Smelting Co. (Ltd.) (The), 33d st., Pittsburgh, Pa.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Martin Rufus & Co., 114 Nassau st., N. Y. **52.**
St. Thomas Car Wheel Co., St. Thomas, Ont., Can.
Snead & Bibb, Louisville, Ky.
Williams, E. A. & Son, 109 Plymouth st., Jersey City, N. J. **x.**

Castings—Crucible Steel.

Johnson, Isaac G. & Co., Speuyten Duyvil, N. Y.
Pittsburgh Steel Casting Co., 26th and Railroad sts., Pittsburgh, Pa.
Schulte, Nehring & Co., Evansville, Ind.
Standard Steel Casting Co., Thurlow, Pa.
Syracuse Steel Foundry Co., Syracuse, N. Y.

Castings—Electrical.

New England Butt Co., Providence, R. I.
Palmers & DeMooy, Leonard and Winter sts., Cleveland, O.

Castings—Electric Railway.

Wm. Wharton, Jr., & Co. (Inc.), 25th st. and Washington av., Philadelphia, Pa.

Castings—General.

Ætna Machine Co., Warren, O.
Bibb, B. C. & Sons, Baltimore, Md.
Buchanan Mfg. Co., 176 Central Way, Cleveland, O.
Midvale Steel Co., Nicetown st., Phila., Pa.
Union Mfg. Co., New Britain, Conn.

Castings—Iron.

Armitage, Herschell & Co., Tonawanda, N. Y.
Bartlett, Hayward & Co., Baltimore, Md.
Bass Foundry and Machine Works, Fort Wayne, Ind.
Bass, J. H., Chicago, Ill.
Bethlehem Iron Co., Bethlehem, Pa.
Buffalo Cast Iron Pipe Co., 344 Exchange st., Buffalo, N. Y.
Buffalo Hardware Co , Swan st., Buffalo, N. Y.
Buffalo Pattern Works, 2 John st., Buffalo, N. Y.
Builders' Iron Foundry, Providence, R. I.
Cadman, A. W. & Co., 63 Water st., Pittsb'gh, Pa.

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Chattanooga Foundry and Pipe Works, Chattanooga, Tenn.
Cheney, S. & Son, Manlius, N. Y.
Chicago Forge & Bolt Co., Chicago, Ill.
Cincinnati and Newport Iron and Pipe Co., Newport, Ky.
Cleveland Foundry Co., Cleveland, O.
Continental Iron Works, Brooklyn, N. Y.
Co-operative Foundry Co., Detroit, Mich.
Creswell, David S., 816 Race st., Phila., Pa.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.
Deuscher, H. P., Hamilton, O.
Devlin, Thos. & Co., Lehigh av. and American st., Phila., Pa.
Dickson Mfg. Co., Scranton, Pa.
Drummond Mfg. Co., Louisville, Ky.
Drummond, M. J., Equitable Bldg., N. Y.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Eamus Pipe Foundry, Eamus, Pa.
Eastman Machine Co., North Troy, Vt.
Eureka Cast Steel Co., Chester, Pa.
Fairhaven Iron Works, Fairhaven, Mass.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Farrel Foundry & Machine Co. (The), Ansonia, Conn.
Fisher, Wm., 23d and Smallman sts., Pittsb'gh, Pa.
Flagg, Stanley G. & Co., Phila., Pa.
Floyd, Jas. R., 531 W. 20th st., N. Y.
Forbes, A. D., Rockford, Ill.
Garrett, W. T. & Co., San Francisco, Cal.
Globe Steam Heater Co., North Wales, Pa.
Gloucester Iron Works, 6 N. 7th st., Phila., Pa.
Green, W. H., Chester, Pa.
Griffin Car Wheel Co., Detroit, Mich.
Haight & Clark, Pleasant, ab. Pearl st., Albany, N. Y.
Hammer & Co., Bradford, Conn.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Haughton, N., Huron, n. Lafayette st., Toledo, Ohio.
Hawkins, R. F., Iron Works, Springfield, Mass.
Hewes & Phillips Iron Works, Newark, N. J.
Hillard, Sterrit & Co. (Ltd.), 308 Duquesne way, Pittsb'g, Pa.
Holyoke Machine Co., Holyoke, Mass.
Hotchkiss, Guy C. Field & Co., 624 E. 14th st., N. Y.
Hoyt & Wynkoop, Troy, N. Y.
Hurlbut, Mfg. Co., Racine Junction, Wis.
Illinois Malleable Iron Co., 581 Diversey av., Chicago, Ill.
Johnson, J. G. & Co., Spuyten Duyvil, N. Y.
Johnson & Holt, Fort Elm st., Camden, N. J.
Johnston & Austin, 176 Central Way, Cleveland, Ohio.
Jonson Foundry & Machine Co., 118th st & H.R., N. Y.
Kerr, Murray, Mfg. Co., Fort Wayne, Ind.
Kinzer & Jones, 37 Penn av., Pittsb'g, Pa.
Lea, Robert, 1st av. & Ferry st., Pittsb'g, Pa.
Lincoln & Dodge, Alger st., South Boston, Mass.
Litchfield Car & Machine Co., Litchfield, Ill.
Loeb, Peter, Decatur, Ill.
Logan & Strobridge, Pittsburgh, Pa.
Lombard, Geo. R. & Co., Augusta, Ga.
Long, & Co., 188 Liberty st., Pittsb'g, Pa.
McArthur-Gilmore Foundry Co., 875 Pearl st., Cleveland, O.
McConway & Forley Co., 48th st. & A. V. R. R., Pittsb'g, Pa.
McFarland, Warren & Co., Worcester, Mass.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Mahoning Rolling Mill Co., 330 Walnut st., Phila., Pa.
Malleable Iron Fittings Co., Branford, Conn.
Mansfield & Co., 57 1st av., Pittsb'g, Pa.
Meilert Foundry & Machine Co. (Ltd.), Reading, Pa.
Michigan Iron Works, Grand Rapids, Mich.
Middletown Car Works, Middletown, Pa. **65.**
Morris, Tasker & Co., 224 S. 3d st., Phila., Pa.
Mt. Penn. Stove Works, Reading, Pa.
Myers, Osborn & Co., Cleveland, O.
New Howe Mfg. Co., Bridgeport, Conn.
N. Y. Plow Co., 55 Beekman st., N. Y.
Noble Stove Co. (The), 92-94 Pleasant st., Lynn, Mass.
North Bros. & Co., 23 Race st., Phila., Pa.
North Western Malleable Iron Co., Milwaukee, Wis.
Novelty Iron Works, Dubuque, Iowa.; 3124 Market st., Phila., Pa.
Noye, John T. Mfg. Co. (The), Buffalo N. Y.
Ohio Falls Car Co., Jeffersonville, Ind.
Ohio Pipe Co., Columbus, O.
Pacific Iron Works, Bridgeport, Conn.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Palmer & De Mooy, Cleveland, O.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Peacock, Geo., Selma, Ala.
Phila Tool Co., 27th and Oakford sts., Phila., Pa.
Pittsburgh Mfg. Co., Railroad, n. 28th st., Pittsburgh, Pa.
Pittsburgh Steel Casting Co., Pittsburgh, Pa.
Portland Co., Portland, Me.
Powers, Wm. T. & Son, Grand Rapids, Mich.
Pratt & Litchworth, Buffalo, N. Y.
Queen City Malleable Iron Co., Vine and 2d sts., Pittsburgh, Pa.
Racine Hardware Mfg. Co., Racine, Wis.
Racine Malleable & Wrought Iron Co., Racine, Wis.
Rhode Island Malleable Iron Works, Hills Grove, R. I.
Sandusky Machine & Ag'l Works, Sandusky, O.
Saunders Son's, D., Yonkers, N. Y.
Segren, Charles V., Marquette, Mich.
Sering, Shaugle & Son, Highstown, N. J.
Sessions Foundry Co., Bristol, Conn.
Sharon Steel Casting Co., Sharon, Pa.
Shepard Hardware Co., Buffalo, N. Y.
Spencer's, I. S. Sons, Guilford, Conn.
Springfield Foundry Co., 99 Liberty st., Springfield, Mass.
Stacey Mfg. Co., Cincinnati, O.
Stearns, E. C & Co., Syracuse, N. Y.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Syracuse Malleable Iron Co., Syracuse, N. Y.
Syracuse Steel Foundry Co., Syracuse, N. Y.
Taylor, Wm. & Sons, 25-39 Adams st., Brooklyn, N. Y.
Taylor & Boggis Foundry Co. (The), 65 Central Way, Cleveland, O.
Thos. D. West Foundry Co., Cleveland, O.
Torrance, Merriam & Co., Troy, N. Y.
Torrance & Co., Troy, N. Y.
Towanda Foundry Co., Towanda, Pa.
Tuttle & Whittemore Co. (The), Naugatuck, Ct.
U. S. Mitis Co. (The), 26 B'way, N. Y.
Vulcan Iron Co., Richmond, Va.
Vulcan Iron Foundry (The), New Castle, Pa.
Vulcan Iron Works, New Britain, Conn.
Warner, G. F., Mfg. Co. (The), 213-228 East st., New Haven, Conn.
Waterbury Malleable Iron Co., Waterbury, Conn.
Westervelt, A. B. & W. T., 102 Chambers st., N. Y.
Wetherill, Robt. & Co., Chester, Pa.
Wilmington Malleable Iron Co, Wilmington, Del.
Wilson, J. B. & Co., Woodbridge & 13th st, Detroit, Mich.
Winsted Foundry & Machine Co. (The), West Winsted, Conn.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Woodruff, Miller & Co., Mt. Carmel, Conn.
Wright, Wm., Newburgh, N. Y.

Castings—Malleable Iron.

Bridgeport Malleable Iron Co. (The), Bridgeport, Conn.
Chicago Malleable Iron Co., 26th st., nw. c. Western av., Chicago, Ill.
Dayton Malleable Iron Co. (The), Dayton, O.
Fitch, W. & E. T., 139-169 East st., New Haven, Conn.
McConway & Torley, 48th st. & A. V. R. R., Pittsburgh, Pa.
Minnemeyer, H. W. & Co., 107 River av., Allegheny, Pa.

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Northwestern Malleable Iron Co., Milwaukee, Wis.
Racine Malleable & Wrought Iron Co. (The), Racine, Wis.
Troy Malleable Iron Co., Troy, N. Y.
Vulcan Iron Works, New Britain, Conn.

Castings—Locomotive.

Solid Steel Co. (The), Alliance, O.

Castings—Machine.

Arcade Malleable Iron Co., 63-67 Washington sq., Worcester, Mass.
Central Iron Foundry, 202 Border st., E. Boston, Mass.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
City Iron Foundry, 198-202 W. 2d st., S. Boston, Mass.
Fitzsimmons, Wm. & Son, 435 B'way, Cleveland, Ohio.
Palmers & De Mory, Leonard, c. Winter st., Cleveland, O.
Riverside Foundry Works (The), 26 Carter st., Cleveland, O.
Rollstone Iron Foundry, Fitchburg, Mass.
Springfield Foundry Co., 99 W. Liberty st., Springfield, Mass.
Sweet, Geo. W. & C., Troy, N. Y.
Williams, E. A. & Son, 107-111 Plymouth st., Jersey City, N. J. **x.**

Castings—Railway.

Albany Lubricating Compound & Cup Co., 313 West st., N. Y.
Allentown, Rolling Mills (The), Allentown, Pa.
Allis, Edward P. & Co., Milwaukee, Wis.
Allison Mfg. Co. (The), Philadelphia, Pa.
Andrews, Frank H., 545 W. 33d st., N. Y.
Barney & Smith Mfg. Co., Dayton, O.
Barnum Richardson Co., Salisbury, Conn.
Bass, J. H., 97 Dearborn st., Chicago, Ill.
Baugh Steam Forge Co., Detroit, Mich.
Birmingham Iron Foundry, Birmingham, Conn.
Boles, H. M., Scranton, Pa.
Bowler & Co., 10-24 Winter st., Cleveland, O.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Calumet Iron & Steel Co., Chicago, Ill.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Carnegie Bros. & Co., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), Pittsburgh, Pa.
Cayutu Wheel and Foundry Co., Sayre, Pa.
Chester Steel Casting Co., 407 Library st., Philadelphia, Pa. **46.**
Cleveland Wheel and Foundry Co., 20 Carter st., Cleveland, O.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Hinkley Locomotive Co., Boston, Mass. **62.**
Dayton Malleable Iron Co., Dayton, O.
Detroit Car Wheel Co., 1 Newberry st., Detroit, Mich.
Eagle Iron Works, Terre Haute, Ind.
Elliott Frog and Switch Co., East St. Louis, Ill.
Ensign Mfg. Co. (The), Huntington, W. Va.
Eureka Cast Steel Co., 307 Walnut st., Philadelphia, Pa.
Excelsior Foundry and Machine Works, Birmingham, Ala.
Excelsior Iron Works Co., Cleveland, O.
Fulton Foundry, 202 Merwin st., Cleveland, O.
Griffin Car Wheel Co., Detroit, Mich.
Griffin Wheel & Foundry Co., Chicago, Ill.
Griffin, Thos. F. & Sons, Buffalo, N. Y.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Kansas City Car and Wheel Co., Beals Bldg., Kansas City, Mo.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lafayette Car Works, Lafayette, Ind.
Lake Shore Foundry, ft. Alabama st., Cleveland, O.
Lebanon Mfg. Co., Lebanon, Pa.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Litchfield Car & Machine Co., Litchfield, Ill.
Lobdell Car Wheel Co., Wilmington, Del.
Mellert Foundry & Machine Co. (Ltd.), Reading, Pa.
Michigan Car Co., Detroit, Mich. **94.**
Middletown Car Works, York, Pa. **65.**
Midvale Steel Co., Nicetown, Phila., Pa.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo. **94.**
Mowry Car Wheel Works, 273½ W. 3d st., Cincinnati, O.
New Albany Steam Forge Co., New Albany, Ind.
N. Y. Central Iron Works, Geneva, N. Y.
Northwestern Malleable Iron Co., Milwaukee, Wis.
Otis Iron & Steel Co., Cleveland, O.
Pardee Car Works, Watsontown, Pa.
Peninsular Car Co., Detroit, Mich.
Pennsylvania Steel Co., Steelton & Phila., Pa. **viii.**
Pioneer Brass Works, 110-112 S. Pennsylvania st., Indianapolis, Ind.
Pratt & Letchworth, Buffalo, N. Y.
Racine Malleable & Wrought Iron Co. (The), Racine, Wis.
Ramapo Iron Works, Hillburn, N. Y.
St. Charles Car Co., St. Charles, Mo.
St. Louis Car Wheel Co., Chamber Commerce Bldg., St. Louis, Mo.
Sayre Type Foundry, Sayre, Pa.
Shepard Hardware Co., Buffalo, N. Y.
Solid Steel Co., Alliance, O.
Standard Steel Casting Co., Thurlow, Pa.
Thayer Mfg. Co., 241 Greenfield av., Milwaukee, Wis.
Tredegar Iron Works, Richmond, Va.
Troy Iron & Steel Co., Troy, N. Y.; 26 B'way, N. Y.
Union Hydraulic Works, Phila., Pa.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. **x.**
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Wason Mfg. Co., Springfield, Mass.

Castings—Ship.

Albany Lubricating Compound & Cup Co., 313 West st., N. Y.
Russell A. & Sons, Newburyport, Mass.
Torrey, J. G. & Son, 180-182 Main st., Rockland, Me.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. **x.**

Castings—Special.

Buffalo Cast Iron Pipe Co., 344 Exchange st., Buffalo, N. Y.
Donaldson Iron Co., Kamus, Pa.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Lake Shore Foundry, Cleveland, O.
Long & Co., Dennis, Louisville, Ky.
Pancoast & Rogers, 28 Platt st., N. Y.
Sayre Pipe Foundry, Sayre, Pa.

Castings—Steam Pump.

Emory, P. P. & Co., 48 Hampden st., Springfield, Mass.
O'Connell, P. J. & Son, 179-183 Main st., Springfield, Mass.

Castings—Steel.

Abraham, L. C., 106 Canal st., Cleveland, O.
Ætna Iron & Steel Works, 161 La Salle st., Chicago, Ill.
Arcade Malleable Iron Co., 63-67 Washington st., Worcester, Mass.
Bethlehem Iron Co., Bethlehem, Pa.
Bolton Steel Co., Canton, O.
Calumet Iron & Steel Co., 1st Nat. B'k Bldg., Chicago, Ill.
Chester Steel Castings Co., 407 Library st., Phila., Pa.; Chester, Pa. **46.**
Chicago Crucible Steel Casting Co., 1336 Indiana av., Chicago, Ill.

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Eureka Cast Steel Co., Chester, Pa., and 307 Walnut st., Phila., Pa.
Flagg, Stanley G. & Co., Phila., Pa.
Howard, Jos. W. 377 Walnut av., Boston, Mass.
Johnson, Isaac G. & Co., Spuyten Duyvil, N. Y.
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.
Kinzer & Jones, Pittsb'g, Pa.
Long & Co., 188 Liberty st., Pittsb'g, Pa.
McFarland, Warren & Co., Worcester, Mass.
Mackintosh, Hemphill & Co. (Ltd.), Etna, c. 12th st., Pittsburgh, Pa.
Malleable Iron Fitting Co., Brandford, Conn.
Midvale Steel Co. (The), Nicetown, Phila., Pa.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo.
Otis Iron & Steel Co., Cleveland, O.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pittsburgh Steel Casting Co., 26th st. & R. R. av., Pittsburgh, Pa.
Pratt & Letchworth, Buffalo Steel Foundry, Buffalo, N. Y.
Sharon Steel Casting Co., Sharon, Pa.
Solid Steel Co., Alliance, O.
Standard Steel Castings Co., Thurlow, Pa.
Syracuse Steel Foundry, Syracuse, N. Y.
U. S. Mitis Co. (The), 26 B'way, N. Y.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Youngstown Steel Co., Youngstown, O.

Castings—Track.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.
Bowler & Co., Cleveland, O.
Chester Steel Castings Co., 407 Library st., Phila., Pa. 46.
Craig, Wm. P., 95 Liberty st., N. Y.
Diederick, Z. P., Sherman, Texas.
Fulton Foundry, Cleveland, O.
Hains Bros., 55 B'way, N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co. (The), Johnstown, Pa. 55.
Keefer, Horace A. Co. (The), Kansas City, Mo. 88.
Lewis & Fowler Mfg. Co. (The), 27 Walworth st., Brooklyn, N. Y.
Metallic Street Railway Supply Co., Albany, N. Y.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Phœnix Steel Wire Broom & Brush Co., 199 E. Randolph st., Chicago, Ill.
Pugh & Russell, Stewart Bldg. N. Y.
St. Thomas Car Wheel Co., St. Thomas, Ont., Canada.
Snead & Bibb, Louisville, Ky.
Street Railway Supply Co., Cleveland, O.
Toote, Orlo A., Cleveland, O.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.
Wharton, Wm. Jr. & Co. (Inc.), 25th st. & Washington av., Phila., Pa.
Whiting Mfg. Co., Cedar Rapids, Ia.
Whitney, A. & Sons, Phila., Pa.

*Catalogue & Guide Printer.

Clinton-Ellinger Press, 7, 9 & 11 New Chambers st., N. Y. 75.
Rockwell & Churchill, 39 Arch st., Boston, Mass. 66.

Caulking Irons & Mallets.

Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.

Ceilings—Car.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Dayton Mfg Co. (The), Dayton, O.
Diederick, Z. P., Sherman, Texas.
Frost & Peterson, 163 W. 18th st., N. Y.
Gardner & Co., 643 W. 48th st., N. Y.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Kuhlmann Car Co., 490 St. Clair st., Cleveland, Ohio.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Pugh & Russell, Stewart Bldg., N. Y.
Purdy & Huntington Co. (Ltd.), 60 Shoe la., London, Eng.

Ceilings—Metal.

Bakewell & Mullins, Salem, O.
Canton Iron Roofing, Canton, O.
Northrop, A. & Co., S. 23d & Mary sts., Pittsburg, Pa.

Cement—Asbestos.

Asbestos Packing Co., 33 John st., N. Y.
Johns, H. W., Mfg. Co., 87 Maiden la., N. Y.

Cement—Cable Railroads.

Brockett, C. A., 800 Delaware st., Kansas City, Mo. 69.
Empire Warehouse Co., 210 Market st., Chicago, Ill.

Cement—Hydraulic.

Cumberland Hydraulic Cement Mfg. Co., 67 William st., N. Y.
Fisher, Erskine W., 18 B'way, N. Y. 65.
Hicks & Brown, Bellefonte, Pa.
Hudson River Cement Co., 95 Liberty st., N. Y.
Kansas Cement Works Co., C. A. Brockett, Gen'l Agt., 800 Del. av., Kansas City, Mo. 69.
Meacham & Wright, 98 Market st., Chicago, Ill.
N. Y. Cement Co., 5 Dey st., N. Y.
N. Y. & Rosedale Cement Co., 229 B'way, N. Y.
Norton, F. O., 92 B'way, N. Y.
Standard Cement Co., Hartford, Conn.
Tompkins, Calvin, 337 South st., N. Y.
Union Akron Cement Co., 141 Erie st., Buffalo, N. Y.

Cement—Imp'rs & M'f'rs.

Akron Cement Works, 401 White Bldg., Buffalo, N. Y.
Alamo Cement Co., San Antonio, Texas.
Alsen's Portland Cement Works, 16-18 Exchange pl., N. Y.
Am. Improved Cement Co., 216 S. 3d st., Philadelphia, Pa.
Anglo-American Portland Cement Co., 189 La Salle st., Chicago, Ill.
Babson, Albert C., 16 Exchange pl., N. Y.
Baetjer & Meyerstein, 5 Dey st., N. Y.
Bangs & Gaynor, Fayetteville, N. Y.
Beach, W. F., Jeffersonville, Ind.
Behrend & Triest, 49 Cedar st., N. Y.
Belden, S. & Son, 69 Commerce st., Hartford, Conn.
Belknap, C. W. & Son, Portland, Me.
Belknap, D., Cementville, Ind.
Bellefonte Cement Works, Bellefonte, Pa.
Berry & Ferguson, 41 Medford st., Boston, Mass.
Bigelow, A. E., c. Bagley av. and Cass st., Detroit, Mich.
Binney, J. W., 17 Platt st, N. Y.
Bleakly, W., Camden, N. J.
Blizzard, L. C., Millville, N. J.
Blochman & Cerf, 5 Drumm st,, San Francisco, Cal.
Blunt, H. W., 1059 31st st., Washington, D. C.
Brady & Co., ft. Woodward av., Detroit, Mich.
Brand, James, 7 Burling Slip, N. Y.
Brandt, E. P., 25 P. O. av., Baltimore, Md.
Bridges & Henderson. Hancock, Md.
Bringham, H. R., 95 Liberty st., N. Y.
Brockett, C. A., 800 Delaware st., Kansas City, Mo. 69.
Brooks, Shoobridge & Co., 7 Bowling Green, N.Y.
Brown, J. E., 39 S. 4th st., Philadelphia, Pa.
Bryan, W. H., Ravenswood (Lake View), Chicago, Ill.
Buffalo Cement Co. (Ltd.), Franklin, c. Eagle st., Buffalo, N. Y.

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Bullock, J. & Son, 205 Smith's Wh'f, Baltimore, Md.
Burns, D. F., Cambridgeport, Mass.
California Portland Cement Co., 330 Pine st., San Francisco, Cal.
Camp, Hugh N. & Sons, 55 Liberty st., N. Y.
Capital Lime & Cement Works, Junc. Erie and Chaplain Canal, West Troy, N. Y.
Carr, S., Cementville, Ind.
Chamberlain, W., Rahway, N. J.
Cheney, W. E. & Son, 558 River st., Troy, N. Y.
Chicago Union Lime Works, 153 S. Market st., Chicago, Ill.
Chilton Mfg. Co., 48 Maiden la., N. Y.
Clark, E. W., Swedesboro, N. J.
Clark, Fielden & Co., 3 blks. W. of depot (Oak Park P. O.), Chicago, Ill.
Clark, W. Wirt & Son, 115 S. Gray st., Balt., Md.
Classen, H. W. & Co., 515 S. Howard st., Balt., Md.
Coleman, W. T. & Co., Market, c. Main st., San Francisco, Cal.
Colson, Chas. D., 20 W. Lake st., Chicago, Ill.
Connecticut Patent Water Pipe Co., 78 Crown st., New Haven. Conn.
Copeland, J. C., 162 S. St. Paul st., Rochester, N. Y.
Cuddihy, J. J., 613 Albany st., Boston, Mass.
Cumberland Cement Co., 69 William st., N. Y.
Cumberland Hydraulic Cement Co., Cumberland, Md.
Cumberland Hydraulic Cement Mfg. Co., 67 William st., N. Y.
Cummings Akron Cement Works, 200 Main st., Buffalo, N. Y.
Darling & Stebbins, 21 Exch. pl., Boston, Mass.
Davenport, S. J., 11 Sweddle Bldg., Albany, N. Y.
Davis & Cowell, 211 Drumm st., San Francisco, Cal.
Day, Marcellus Co., 21 Devonshire st., Boston, Mass.
Decomeau, Ulrich, 74 W. 53d st., N. Y.
Dell, F. M., Indianapolis, Ind.
Dempster & Keys, 202 Market st., San Francisco., Cal.
Diggs, S. J., 707 S. Caroline st., Balt., Md.
Distler, J. C. Jr., 2101 Boston st., Balt., Md.
Doolittle, E. T., 45 Gilbert st., Bridgeport, Conn.
Druecker, N. J., 1 N. Market st., Chicago, Ill.
Drummond & Lemont, 435 Valencia st., San Francisco. Cal.
Dunn, Wm. T. & Co., 240-246 Rebecca st., Allegheny, Pa.
Dustin, M. R. & Co., Brockton, Mass.
Dwight, H. A., 117 Peir st., Albany, N. Y.
Ebert, M., 32 Walnut st., Phila., Pa.
Eckmeyer & Co., 42 Beaver st., N. Y.
Einfeldt & Eastman, 4 blks. W. of depot (Oak Park P. O.), Chicago, Ill.
Emerson C. & Sons, Haverhill, Mass.
Empire Warehouse Co., 198 S. Market st., Chicago, Ill.; 24 State st., N. Y.
Farr, C. D., 352 Atwater st., Detroit, Mich.
Felton, J., 22 W. Seneca st., Buffalo, N. Y.
Ferris & Walworth, Grand Rapids, Mich.
Fisher, Erskine, W., 18 B'way, N. Y. 65.
Fiske & Coleman, 62 Congress st., Boston, Mass.
Fleming, Howard, 23 Liberty st., N. Y.
Fort Scott Cement Works. Fort Scott, Kan.
Frank, M. G., 800 Carson st., Pittsb'g, Pa.
Frazeur & Rice, Bridgeton, N. J.
Freese, N. L., Salem, Mass.
French, S. H. & Co., York av., c. 4th & Callowhill, Phila., Pa.
Fuller, W. & Sons, 74 Pier st., Albany, N. Y.
Gabriel & Schall, 205 Pearl st., N. Y.
Garfield, Fertig & Co., 65 Sandusky st., Allegheny, Pa.
Garrell, G., 1332 N. Cary st., Balt., Md.
Garry Iron Roofing Co., 151 Merwin st., Cleveland, O.
Gaskill, J. C., Birmingham, N. J.
Gegner, J. A., 11 Eastern av., Balt., Md.
German Rock Asphalt & Cement Co., 12 Kremlin Hall, Buffalo, N. Y.
Gheens, C. W., Cementville, Ind.
Gilbert, C. L. & Co., Savannah, Ga.
Gilmour, Rob't M., 82 John st., N. Y.
Grawitz, Gustav, 165 B'way, N. Y.
Griffin, John, 918 S. Halstead st., Chicago, Ill.
Guinard, Henry, 592 Wash'n st., N. Y.
Gutow, C. & Co., 346 Atwater st., Detroit, Mich.
Hadfield & Co., Waukesha, Wis.,
Ham & Carter, 730 Albany st., Boston, Mass.
Hamilton, S. M. & Co., 14 S. Gay st., Balt., Md.
Hammill & Gillespie, 240 Front st., N. Y.
Harris, W. W., 142 4th av., Louisville, Ky.
Hartford Cement Tile Co., 69 Commerce st., Hartford, Conn.
Heames, H. & Son, 951 Woodbridge st., Detroit, Mich.
Hilliard, T. T. & Son, Salem, N. J.
Hobbs, Glidden & Co., 94 State st., Boston, Mass.
Holmes Lime Co., 18 Market st., San Francisco, Cal.
Houghton, H., 885 Woodbridge st., Detroit, Mich.
Howe Cement Co., Norwich, Conn.
Howe's Cave Lime & Cement Co., Howe's Falls, N. Y.
Hoxie, T. W. & Co., 236 State st., Boston, Mass.
Hudson River Cement Co., Hudson, N. Y.; 95 Liberty st., N. Y.
Hurd, W., Fayetteville, N. Y.
Improved Ealge Portland Cement Co., Kalamazoo, Mich.
Irvine & Carty, 525 N. 23d st., Phila., Pa.
Johns, H. W. Mfg. Co., 87 Maiden la., N. Y.
Johnson, E. E., East Saginaw, Mich.
Johnson & Lund, 620 Race st., Phila., Pa.
Johnson & Wilson, 45 B'way, N. Y.
Kelly, J. J. & Co., 211 St. Paul st., Balt., Md.
Koster, C., 17 Park pl., N. Y.
Kuhl, C. Artificial Stone Co. (The), 91-93 W. Canal st., Cincinnati, O.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Lawrence Cement Co., 67 William st., N. Y.; 715 N. Delaware av., Phila., Pa.
Lawrenceville Cement Co., 115 B'way, N. Y.; Rosendale, N. Y.
Leggett, Wm. T., 1025 Liberty st., Pittsb'gh, Pa.
Leonard, C. T. & Son, Norwalk, Conn.
Lesley & Trinkle, 257 S. 4th st., Phila., Pa.
Lewis, D. W., 81 Water st., Boston, Mass.
Lewis, T., ft. Aubin av., Detroit, Mich.
Lewis & Co., New 71 Penn av., Pittsburgh, Pa.
Lippincott, C, Salem, N. J.
Lloyd Iron Roofing & Paint Co., 56 W. Lake st., Chicago, Ill.
Louisville Cement Co., Watson, Ind., 331 Main st., Louisville, Ky.
McAllister, J., President, c. Fawn st., Balt., Md.
McCammon, L. C., Cincinnati, O.
McConnell, John A., 119 Water st., Pittsb'h, Pa.
McGill, J. H., 608-614 G st., Washington, D. C.
McIntyre & Reardon, 115 West st., N. Y.
McKallip, L. S. & Co., 12th, c. Pike st., Pittsburgh, Pa.
Major, Alphonse, 232 William st., N. Y.
Mandery, L., 156-158 S. St. Paul st., Rochester, N. Y.
Martin, Henry & Co., 200 E. Washington st., Chicago, Ill.
Martling, J. W., Mishawaka, Ind.
Mayville Lime Co., E. Division, c. Cherry av., Chicago, Ill.
Meacham & Wright, 98 S. Market st., Chic., Ill.
Merchant, Stephen L., 15 State st., N. Y.
Metz, C., 1163 Whatcoat st., Baltimore, Md.
Michaels, M., Logansport, Ind.
Mill, O. V. C., Cementville, Ind.
Miller & Vanvalen, 14 Vesey st., N. Y.
Milnor, T. & Son, Burlington, N. J.
Milwaukee Cement Co., Milwaukee, Wis.
Moen's Asphaltic Cement Co., 103 Maiden lane, N. Y.
Morley, Ewen & Co., East Saginaw, Mich.
Morse, Frank E., 7 Coenties Slip, N. Y.
Munch Bros., 118 11th st., Chicago, Ill.
Nash, W. G., 220 State st., Boston, Mass.
Neuss, Hesslein & Co., 29 White st., N. Y.
Newark Lime and Cement Co. (The), ft. Bridge st., Newark, N. J.; Hudson, N. Y.
Newark and Rosendale Co., 786 Broad st., Newark, N. J.; 15 Cortlandt st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Newman, E. J. & Co., 50 River st., Buffalo, N.Y.
N. Y. Cement Co., 5 Dey st., N. Y.; Rosendale, N. Y.
N. Y. Rosendale Cement Co., Rosendale, N. Y.; 229 Broadway, N. Y.
Noble & Co., ft. 1st st., Detroit, Mich.
Noe, Geo. T., 120 Broadway, N. Y.
Norton, F. G., High Falls, N. Y.
Norton, Frederick O., 2 Wall st., N. Y.
Nute, Andrew T., 100 Swett st., Boston, Mass.
Ohio Valley Cement Co., 209 3d st., Louisville, Ky.
Osborn, C. C., 43 W. 49th st., N. Y.
Osborn & Robinson, 87 Dey st., N. Y.
Otley & Watkins, 59 S. Clark st., Chicago, Ill.
Ottumwa Artificial Stone & Pipe Works, Ottumwa, Iowa.
Outcalt & De Hart, New Brunswick, N. J.
Pacific Cement Co., 727 Montgomery st., San Francisco, Cal.
Peabody, Henry W. & Co., Boston, Mass.
Peirce Cement Pipe Works, Washington av. & Thompson st., Bridgeport, Conn.
Penna. Mfg. Mining & Supply Co., 1004 Penn av., Pittsburgh, Pa.
Phœnix Oil & Cement Co., Front & Market sts., Phila., Pa.
Pierce Mfg. Co., 159 N. Washington av., Bridgeport, Conn.
Pittsburgh Builders Supply Co. (Ltd.), 6th av., c. Smithfield st., Pittsburgh, Pa.
Portland Cement Co., Columbus, O.
Prentice & Hackett, 1009 Liberty st., Pittsburgh, Pa.
Prentiss, R. T., Holyoke, Mass.
Purcell, Hycent, Cambridgeport, Mass.; 239 Main st., Chicago, Ill.
Raymond Bros., South Norwalk, Conn.
Reeve, J. N., Medford, N. J.
Reid, R., Lexington, Ky.
Reiter & Co., ft. Ridge av., Allegheny, Pa.
Rimington, C. T., 42 B'way, N. Y.
Rimington, S. A., 42 B'way, N. Y.
Roby, D. & Co., 280 Causeway st., Boston, Mass.
Rock Lock Rosendale Cement Co., 67 William st., N. Y.
Rosendale Cement Co., 69 William st., N. Y.
Ross, J. H., 141 Erie st., Buffalo, N. Y.
Ross, R., 218 Brush st., Detroit, Mich.
Russell, Giese & Co., 306 Spear's wharf, Balt., Md.
Russia Cement Co., Gloucester, Mass.
Russia Cement Co., 95 Chambers st., N. Y
Rutland Fire Clay Co., Rutland, Vt.
Saacke, Chas. W., 58 Pine st., N. Y.
Sayre, T. F. & H. C., Elizabeth, N. J.
Sayre, J. R., Jr., & Co., River, n. Centre st. depot, Newark, N. J.
Scace & Bishop, 235 Fulton st., Chicago, Ill.
Schillinger, J. J., 420 E. 92d st., N. Y.
Scofield, Geo. E., 454 E. 138th st., N. Y.
Sheedy, J., Fayetteville, N. Y.
Sheldon, C. A., 69 Atwater st., Detroit, Mich.
Sherman Weeks & Co., Hudson, N. Y.
Shurr, Jno. J., 329 E. 10th st., N. Y.
Sibley, F. B. & Co., 340 Atwater st., Detroit, Mich.
Sims & Smither, Indianapolis, Ind.
Sinclair & Babson, 18 Exchange pl., N. Y.
Skibowski, A., 16 Ohio st., Detroit, Mich.
Snow, John, 76 Exchange st., Rochester, N. Y.
Snyder, A. J., Rosendale, N. Y.
Speed, J. B. & Co., 331 W. Main st., Louisville, Ky.
Standard Cement Co., 13 Central Row, Hartford, Conn.; 200 Main st., Buffalo, N. Y.
Stearns & Co., 248 E. Lake st., Chicago, Ill.
Stevens, Chas. J., 7 Bowling Green, N. Y.
Stone & Pipe Mfg. Co., South Bend, Ind.
Story & Wilbur, 539 Commercial st., Boston, Mass.
Sturk, Jno. H., 154 E. 86th st., N. Y.
Suchlick, J. B. & Co., 2 Stone st., N. Y.
Taylor, J. H., 98 Maiden la., N. Y.
Taylor & Bullock, 935 Liberty av., Pittsb'g, Pa.
Te-Nex-Ine Co., 147 High st., Boston, Mass.
Thakara, D., Woodbury, N. J.
Thiele, Emile, 78 William st., N. Y.
Thompson, D. B., Bridgeton, N. J.
Thormann, J. H. & Co., 14 McClellan st., Balt., Md.
Trotten, T. & Sons, 125 Cheapside st., Balt., Md.
Troy Paint & Color Works, 171-173 Hill st., Troy, N. Y.
True, W. D., South Norwalk, Conn.
Tucker, Wm. G., ft. E. 116th st., N. Y.
Turner, A. & Son, Mantua, N. J.
Union Akron Cement Co., 141 Erie st., Buffalo, N. Y.
Utica Cement Association, 98 Market st., Chicago, Ill.
Union Cement & Lime Co., 501 W. Main st., Louisville, Ky.
Union Stone Co., 38 Hawley st., Boston, Mass.
U. S. Cement Co., 15 Broad st., N. Y.
Utica Cement Mfg. Co., 218 La Salle st., Chicago, Ill.
Utica Hydraulic Cement Co., Utica, Ill.
Valentine, J. E., 11½ James sl., N. Y.
Vandervoort & Tucker, 543-551 E. 116th st., N. Y.
Van Stans Stratena Co., 214 Evelina st., Phila., Pa.
Vandemark, J. H., High Falls, N. Y.
Waldo Bros., 88 Water st., Boston, Mass.
Walker, N. U. Mfg. Co., 10th & Penn aves., Pittsburgh, Pa.
Wallkill Portland Cement Co., 11 Dey st., N. Y.
Walls, J. & Son, 45 W. Tupper st., Buffalo, N. Y.
Ward, E. H., Jr., Deal Beach, N. J.
Warren, L. J., 18 East Falls av., Balt., Md.
Webster, W. F., Albany st., Boston, Mass.; Cambridgeport, Mass.
Western Cement Association, 247 W. Main st., Louisville, Ky.
Wheeler, E. 84 Crescent av., Bridgeport, Conn.
Whitehall Fire Clay Works, 286 S. Canal st., Chicago, Ill.
Whitmore, Rauber & Vicinus, 279 S. St. Paul st., Rochester, N. Y.
Williams, C. L. & Co., 779 Mission st., San Francisco, Cal.
Williams, N. A., 219 E. Washington st., Chicago, Ill.
W'msville Quick Lime Co., 126 B'way, Buffalo, N. Y.
Wilson, Wm. L. (Ltd.), 507 Chestnut st., Phila., Pa.
Wolff & Rheinhold, 506 Battery st., San Francisco, Cal.
Wood, G. H. & Co., 34 Oliver st., Boston, Mass.
Woodrug, C. L., 191 B'way, Albany, N. Y.
Young, Arthur & Co., 54 Kilby st., Boston, Mass.
Zinsser, Wm. & Co., 197 William st., N. Y.

Cement—Portland.

Alsen's Portland Cement Works, 18 Exchange pl., N. Y.
American Improved Cement Co., 216 S. 3d st., Phila., Pa.
Belloni & Co., 41 South st., N. Y.
Brady & Co., ft. Woodward av., Detroit, Mich.
Brand, James, 7 Burling sl., N. Y.
Brand, James, 85 Beekman st., N. Y.
Brockett, C. A., 800 Delaware st., Kansas City, Mo. **69.**
Brooks, Shoobridge & Co., 7 Bowling Green, N. Y.
Coplay Cement Co., Allentown, Pa.
Eckmeyer & Co., 42 Beaver st., N. Y.
Empire Warehouse Co., 210 Market st., Chicago, Ill.
Fisher, Erskine W., 18 B'way, N. Y. **65.**
Fleming, Howard, 23 Liberty st., N. Y.
Hammill & Gillespie, 240-242 Front st., N. Y.
Johnson & Wilson, 45 B'way, N. Y.
Kansas City Frear Stone & Pipe Mfg. Co., Kansas City, Mo.
Lesley & Trinkle, 216 S. 3d st., Phila., Pa.
N. Y. & Rosendale Cement Co., 229 B'way, N. Y.
Norton, F. O., 92 B'way, N. Y.
Portland Cement Pipe & Stone Co., Portland, Me.
Saacke, Chas. W., 58 Pine st., N. Y.
Skibowski, August, Dequindre & Forest avs., Detroit, Mich.

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Thiele, E., 78 William st., N. Y.
Tomkins, Galvin, 388 South st., N. Y.
White, J. C. B. & Bro., 23 Liberty st., N. Y.

Cement—Rubber.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Daggett, John R., Franklin st., Boston, Mass.
Goodyear's India Rubber Glove Mfg. Co., 503-505 B'way, N. Y.
Gutta Percha & Rubber Mfg. Co. (The), c. Warren and Church sts., N. Y.
New York Belting & Packing Co., 15 Park Row, N. Y. **v.**
Phœnix Oil & Cement Co., Front and Market sts., Phila., Pa.
Town, Nelson, Hudson, N. Y.
Wood, Geo. H. & Co., 34 Oliver st., Boston, Mass.

Centers—Wrought Iron Car.

Eckstein & Co. C. G., 32 Liberty st., N. Y.

Centres—Steel.

Hussy, Howe & Co., Pittsburgh, Pa.

Chain, Cathead—Hawse Pipe Stopper.

American Ship Windlass Co., Providence, R. I. **xii.**

Chain Links.

Ajax Forge Co., Hoyne and Blue Island avs., Chicago, Ill.
American Bolt Co., Lowell, Mass. **24.**
Buffalo Steam Forge, 24 Hayden Bldg., Buffalo, N. Y.
Burke, P. F., 360 Dorchester av., Boston, Mass.
Carnegie, Phipps & Co., 48 5th av., Pittsb'gh, Pa.
Dewick, C. F. & Co., 360 Dorchester av., South Boston, Mass.
Haskell, Wm. H. Co., Pawtucket, R. I.
Mann, James & Sons, 75 Main st., Buffalo, N. Y.
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.
Wheeling Hinge Co., Wheeling, W. Va.
Wrigley, Thomas, Essex, c. Vine st., Paterson, N. J.

Chains.

American Chain Cable Works, Troy, N. Y.
Barstow, Jacob P., 83 Maiden la., N. Y.
Bassett, R. V., Birmingham, Conn.
Bleecker, Augustus & Son, 48 South st., N. Y.
Bohn, H. Jr., Hankins, N. Y.
Boland, J. K. & Co., New Orleans, La.
Boland, M. F., New Orleans, La.
Bradlee & Co., 816 Richmond st., Phila., Pa.
Brenneman, H. H., Carlisle, Pa.
Birmingham Chain Works, Birmingham, Ala.
Buhl, Sons & Co., 103 Woodbridge av. W., Detroit, Mich.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Carr, J. B. & Co., ft. Smith's av., ab. State Dam, Troy, N. Y.
Chicago Chain Works, 98 Indiana st, Chicago, Ill.
City Iron Foundry & Chain Works, 198-202 W. 2d st., Boston, Mass.
Claffy, John, 48 Dey st., N. Y. **91.**
Coley, S., 305 Medford st., Charlstown, Mass.
Cooper, Hewitt & Co., 17 Burling Slip, N. Y.
Covert Mfg. Co., Central av., West Troy, N. Y.
Crescent City Hame and Chain Works, New Orleans, La.
DeGrauw, Aymar & Co., 34 South st., N. Y.
Dicky Mfg. Co., Jackson, Mich.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Douglas, W. & B., Middletown, Conn.
Dubois, L. B., 112 Steuben st., Jersey City, N. J.
Engler, J., Columbus, O.
Esterbrook, R. & Son, 190 W. 2d st., Boston, Mass.
Ewart Mfg. Co., 11 S. Jefferson st., Chic., Ill.
Farmer, Edw., Trenton, N. J.
Fearing, H. L. & Co., 91 Commercial st., Boston, Mass.
Ferdinand, L. & Co., 267 Federal st., Boston, Mass.
Forrest, B., Jr., & Co., Clifton, c. Westmoreland st., Philadelphia, Pa.
Hagerman, C. C., Dayton, O.
Haskell, Wm. H. Co., Pawtucket, R. I.
Hayden, P., Saddlery Hardware Co. (The), Columbus, O.
Hendryx, A. B. & Co., 18-24 Audubon st., New Haven, Conn.
Hoopes & Townsend, Philadelphia, Pa.
Horton & Sons, Trenton, N. J.
Iron City Chain Works, 29th st., c. Liberty av., Pittsburgh, Pa.
Jeffreys Mfg. Co. (The), Columbus, O.
Jones, T., 441 New Market st., Phila., Pa.
Jones & Laughlins, (Ltd.), 3d av., c. Try st., Pittsburgh, Pa.
Lawrence Iron and Steel Co., Ironton, O.
Levin Jones, Baltimore, Md.
Loring, H. E., 1st st., n. M. S. B., Boston, Mass.
Louisville Chain Works, 1721 High av., Louisville, Ky.
McKay, Jas. & Co., Pittsburgh, Pa.
McKay & Hammond, Pittsburgh, Pa.
McMahon, J. H. & Co., 132 1st av., Pittsburgh, Pa.
Meneely Hardware Co., S. Albany, ab. North st., West Troy, N. Y.
Miller Bros. & Fletcher, 119 2d st. S., Minneapolis, Minn.
Miller Chain Co., Akron, O.
Miller, John C., Hope, n. Lacock st., Allegheny, Pa.
Mortin, Thos., 65 Elizabeth st., N. Y.
Munz, G., David st., c. Central av., Cincinnati, O.
Nawrath, J. P. & Co., 2 Lispenard st., N. Y.
New Chain Works, Boiling Springs, Pa.
Newhall, Henry B. Co., 105 Chambers st., N. Y.
N. J. Steel & Iron Co., 17 Burling sl., N. Y.
Nixdorff-Krein Mfg. Co., 9th, c. Howard st., St. Louis, Mo.
Pacific Chain Works, 8 Pine st., San Francisco, Cal.
Parker & Brenneman, Carlisle, Pa.
Parkhurst & Wilkinson, 164 Kinzie st., Chicago, Ill.
Payne Bros., 114 Mission st., San Francisco, Cal.
Pfefferle, J. F., Newark, N. J.
Phelps Mfg. Co., 17 Drumm st., San Francisco, Cal.
Phœnix Chain Works, 12 Lydia st., Chicago, Ill.
Phosphor Bronze Smelting Co. (Ltd.) (The), 512 Arch st., Phila., Pa.
Plume & Atwood Mfg. Co. (The), 18 Murray st., N. Y.
Queen City Iron Co., Gest st., Cincinnati, O.
Reiter & Co., ft. Ridge av., Allegheny, Pa.
Robson, J. & Son, 2d av. n. Lock 1, Pittsb'g, Pa.
Ruther, Wm., 53-55 N. J. R. R. av., Newark, N. J.
Rounds, David, 2287 B'way, Cleveland, O.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.
Starr, W. C. & Son, Richmond, Ind.
Schmidt, F. W., 217 Brooklyn st., St. Louis, Mo.
Schmidt, John C. & Co., York, Pa.
Schuylkill Haven Iron Co., Pottsville, Pa.
Schwartz, John & Co., Sellersville, Pa.
Smith, John, F., New Orleans, La.
Smith & Egge Mfg. Co. (The), Lafayette, c. Allen st., Bridgeport, Conn.
Southern Hame & Chain Works, New Orleans, La.
Standard Chain Works, Salmon, c. Westmorland st., Phila., Pa.
States, A. M., Trenton, N. J.
Steinbacher, L. & Son, 1755 Hale st., Phila., Pa.
Stirling Chain & Mfg. Co., Cuyahoga Falls, O.
Stirling Chain Works, 250 Amherst, Buffalo, N. Y.

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Taylor, Samuel G., 98 Indiana st., Chicago, Ill.
Trenton Iron Works, New Jersey Steel & Iron Co., Trenton, N. J.
Tuttle & Whittemore Co. (The), Union City, Ct.
Van Volkenberg & Palmer, Binghamton, N. Y.
Walzer, P., 3132 Frankford av., Phila., Pa.
Walzer, W. H., Clearfield, n. Ktn. av., Phila., Pa.
Weaver, James, 12 Lydia st., Chicago, Ill.
Welsh, J. R. E., E. Girard av., n. Norris st., Phila., Pa.
Wendt, H. & Co., 106 E. 2d st., Cincinnati, O.
West Lebanon Rolling Mill Co. (Ltd.), Lebanon, Pa.
Wheeler & Davis, Buffalo, N. Y.
White, Elbert, Stamford, Conn.
Whitehouse, G., 1335 Penna. av., Balt., Md.
Whiton, M. F. & Co., 31 Commercial st., Boston, Mass.
Williams, Geo. A., 85 Fulton st., N. Y.
Wilson, P. & Sons, 6th, c. Carr st., Cincinnati, O.
Woodhouse, S., Stafford, n. Union st., Cleveland, O.
Woodhouse, Wm., Trenton, N. J.
Wyatt, Thos., Eddy, c. Wyatt st., Providence, R. I.

Chains—Jack & Crane.

Bridgeport Brass Co., 19 Murray st., N. Y.
McKay & Co., James, 29th & Liberty sts., Pittsburgh, Pa.
Plume & Atwood Mfg. Co., 18 Murray st., N. Y.
Wallace & Sons, 89 Chambers st., N. Y.

Chains—Brake, R. R.

McKay, James & Co., Liberty & 29th sts., Pittsburgh, Pa.

Chains—Surveyors' & Log.

Gurley, W. & L. E., Troy, N. Y.
Talman, J. P. & Co. (Samson Cordage Works), 164 High st., Boston, Mass. **47.**

Chairs—Common Sense.

Sinclair, F. S., Mottville, N. Y. **41.**

Chairs—R. R. & S. S.

Kane, Thomas & Co., 139 Wabash av., Chicago, Ill. **28 & 29.**

Chandeliers—Car.

Clark, Geo. M., 157-169 Superior st., Chicago, Ill.
Wheeler Reflector Co., 18-24 Washington st., Boston, Mass.

Change Belts, Holders, Etc.

Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Masson, Milton I., 365 av. A, N. Y.
Wales Mfg. Co., 76-78 E. Water st., Syracuse, N. Y. **79.**
Whiting, T. J., 7 South pl., Finsbury, London, Eng.

Channel Plates.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co. (The), Johnstown, Pa.; 712 Mut. Life Bl'g., N.Y.; 6 Oliver st., Boston; Bullitt Bldg., Phila., Pa.; Hamilton Bldg., Pittsburgh, Pa.; Johnson Bldg., Cincinnati, O.; 138 Jackson st., Chicago, Ill.; Bank of Commerce Bldg., St. Louis, Mo.; Cotton Exchange, New Orleans, La. **55.**
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Mysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Pencoyd Iron Works, 261 S. 4th st., Phila., Pa.
Pugh & Russell, Stewart Bldg., N. Y.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. and Washington av., Philadelphia, Pa.

Charcoal.

Aiken & Woodard, East Cambridge, Mass.
Ash, G. A., Waltz Station, Mich.
Auman, C., Tuscarora, Pa.
Babcock, R. M., Williston, O.
Babcock, W. H., 196 St. Clair st., Cleveland, O.
Barry, Warren C., 245 W. 19th st., bet. 7th and 8th avs., N. Y.
Bauer, W., Clayton, Pa.
Bayless & Berkalew, Binghamton, N. Y.
Berger Bros., 170 Michigan st., Chicago, Ill.
Blanchard, C., Orange, N. J.
Boice, R. C., 83 N. J. R. R. av., Newark, N. J.
Bourgnon & Dumanoi, 312 Walnut st., Buffalo, N. Y.
Bowsky, L., 843 3d av., N. Y.
Bradley, Hannah E., 170 Concord st., Brooklyn, N. Y.
Bradley, M., 421 Cherry st., N. Y.
Brainard, F. & Co., Gaines' Station, Mich.
Branson, H., Bamber, N. J.
Brown, G. W., Boonton, N. J.
Brown, J. S., Rose Point, Pa.
Byrne, Moses, Piedmont, Wyoming Ter.
Campbell, J., 45 Bridge st., Brooklyn, N. Y.
Chaffee & Cummings, East Cambridge, Mass.: 35 Hawley st., Boston, Mass.
Chestnut, J., Fort London, Pa.
Clay, D. J., Grafton, N. H.
Conant, S. T. & Son, N. Y. av., c. N. J. R. R. av., Newark, N. J.
Curtins & Co., Roland, Pa.
Curtiss, E. M., Collinsville, Conn.
Devlin, J., 45 Essex st., Jersey City, N. J.; 180 York st., Brooklyn, N. Y.
Devlin, M., 39 Morris st., Jersey City, N. J.
Donahoe, H., 21 Mangin st., N. Y.
Dunbar, E. J., New Boston, Mich.
Dunfel, R., Cookstown, N. J.
Emerson, J. V., Raymond, N. H.
Empire Oil Co., Rose Point, Pa.
Evans, T. R., New Boston, Mich.
Felton, E. C., 116 Dearborn st., Chicago, Ill.
Fox, M., 31 Columbia st., N. Y.
Fuller & Belden, Belden, Mich.
Grant, A., Woodmansie, N. J.
Gray, G. & Co., Gilbert av., Cincinnati, O.
Gibbs, N. J., Wadham's Mills, N. Y.
Griffin, H., Woodmansie, N. J.
Hall, J. H., Brookline, N. H.
Hart & Aikin, 58 S. Water st., New Bedford, Mass.
Heintzen, J., Ecorse, Mich.
Heis, D., Jr., 468 Colerian av., Cincinnati, O.
Heitinann, John D., 355 W. 26th st., N. Y.
Henry, J. E., Carroll, N. H.
Herringa, J., East Saugatuck, Mich.
Hobson, L. D., Langdon, al., Cincinnati, O.
Jenkins, L., Oliver, Ill.
Kauff, M. & Son, Ecorse, Mich.
Koerber, H. & Bro., 17 Washington st., San Francisco, Cal.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Laurel Mfg. Co., 172 4th st., Louisville, Ky.
Luther Chemical & Lumber Co., Luther, Mich.
Maguire, R. J. & Co., 206 Folsom st., San Francisco, Cal.
Martz Bros., Waltz Station, Mich.
Matthews & Hood, Charleton, Mich.
Merrill & Wehrle, Charcoal Co., 544-548 W. 25th st., N. Y.
Michigan Carbon Works, Detroit, Mich.
McCarron, M. J., 178 Devonshire st., Boston, Mass.
McClellan, D., 11 7th av., Newark, N. J.
McConnell, J., 493 E. 142d st., N. Y.
McConnell, J. & J., 60 Sheriff st., N. Y.
McNamee, P., 71 Berry st., Brooklyn, N. Y.
McNulty, J., 162 Lewis st., N. Y.

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Neff, Jos. L., Roland, Pa.
Nicholls, J. W., New York Mills, Mich.
Obermayer, S., Foundry Supply Mfg. Co. (The), Cincinnati, O.
Ohlandt, N. & Co., E. Indiana, n. Nev. st., San Francisco, Cal.
Oliver, J. F., Escanaba, Mich.
Owens, J., 433 Cherry st., N. Y.
Peoria Charcoal Co., Peoria, Ill.
Perkins, H., Bethany, Conn.
Quinn, A., 202 Roebling st., B'klyn, N. Y.
Quinn and Collins, Starrucca, Pa.
Schmidt, H., 69 Hayes st., Newark, N. J.
Schoenling, G., 18 N. Providence st., Cincinnati, Ohio.
Sherman, A., New Boston, Mich.
Smith, J. V. & Son, Spring Valley, N. Y.
Tarman R., Walnut Bottom, Pa.
Van Name, J. & Co., 205 N. J. R. R. av., Newark, N. J.
Walker, Josiah, 513-517 W. 35th st., N. Y.
Waltz, J., Waltz Station, Mich.
Weed, F. B., Ransom, Pa.
Western Fuel & Charcoal Co., 503 Clark st., Chicago, Ill.
Whitaker, B. F., Belden, Mich.
White, A. & Sons, Bangor, Mich.
Woesner, J., Stephenson, Mich.
Wolcott, D., Bath-on-the-Hudson, N. Y.
Wolf, Meyer & Co., Rockwood, Pa.
Wolf, Penrose, Rockwood, Pa.
Wright, C., Berlin, N. J.

Chemical and Physical Laboratory.

Elsom, J. F., New Albany, Ind.

Chests—Express Messenger.

American Tool Co., 116 Chambers st., N. Y.
Bliss Mfg. Co., R., Pawtucket, R. I.
Case Mfg. Co. (The), Columbus, O.
Diebold Safe & Lock Co., Canton, O.
Ehrsam, J. B., Machine Co., Enterprise, Kan.
Gump, Chas., A. Co., Dayton, O.
Harrison, Edward, Mill Co. (The), New Haven, Conn.
Hoye, John T. Mfg. Co. (The), Buffalo, N. Y.
Lima Mill Furnishing Co., Lima, O.
Novelty Mfg. Co., Depere, Wis.
Pratt, J. T. & Co., 53 Fulton st., N. Y.

Chisels.

Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Arnold, J. H. & Son, Lyons, Mich.
Billings & Spencer Co. (The), Hartford, Conn.
Buck Bros., Millbury, Mass.
Crossman, A. W. & Son, West Warren, Mass.
Dickson Mfg. Co., Scranton, Pa.
Drew, C. & Co., Kingston, Mass.
Ellrich Hardware Mfg Co. (The), Plantsville, Conn.
Gerlach, Peter & Co., Columbus & Winter sts., Cleveland, O.
Jennings, C. E., 79 Reade st., N. Y.
Johnson, Wm., Newark, N. J.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Ct.
Peck, Stow & Wilcox Co. (The), Southington, Ct.
Wheeling Hinge Co., Wheeling, W. Va.
White, L. & I. J., 310-314 Exchange st., Buffalo, N. Y.
Winsted Edge Tool Works, West Winsted, Conn.

Chronometers.

Eggert's, D., Sons, 74 Wall st., N. Y.
Negus, T. S. & J. D., 140 Water st., N. Y.
Rupp, Michael & Co., 39 South st., N. Y.

Chucks.

Aitchison & Little, 20 W. Center st., Cleveland, Ohio.
Almond, I. R., B'klyn, N. Y.
Amidon & White, Buffalo, N. Y.
Betts Machine Co., Wilmington, Del.
Brown, R. H. & Co., New Haven, Conn.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
Crary, C. W. & Son, 35-41 E. Indiana st., Chicago, Ill.
Cushman Chuck Co., Hartford, Conn.
Gage Machine Works, Waterford, N. Y.
Hall, F. A. & Co., Danbury, Conn.
Heohenstein Mfg. Co., 49 Dey st., N. Y.; 46 N. 7th st., Phila., Pa.
Hoggson & Pettis Mfg. Co., 64 Court st., New Haven, Conn.
Horton, E. & Son, Co., Windsor Locks, Conn.
Kelly, Daniel, 51 N. 7th st., Phila, Pa.
Morse Twist Drill & Machine Co., New Bedford, Mass.
New Haven Mfg. Co., New Haven, Conn.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Pratt & Whitney Co. (The), Hartford, Conn.; 98 W. Wash'n st., Chicago, Ill.
Smith & Egge Mfg. Co., 188 La Fayette st., Bridgeport, Conn.
Standard Tool Co., Cleveland, O.; 33 Chambers st., N. Y. **49.**
Syracuse Twist Drill Co., Syracuse, N. Y.
Union Mfg. Co., New Britain, Conn.
Union Mfg. Co., 103 Chambers st., N. Y.
Wallace Porter, 14 Artizan st., New Haven, Conn.
Washburn, J. R., West Stafford, Conn.
Westcott Chuck Co., Oneida, N. Y.
Whiton, D. E. Machine Co. (The), 59 Howard st., New London, Conn.

Clamps.

Ainsworth, E., 826 Washington st., Wilmington, Del.
Aldrich, Milton, Lowell, Mass.
Allen & Co., W. D., 151 Lake st., Chicago, Ill.
American Ship Windlass Co., Providence, R. I. **xii.**
Armstrong Mfg. Co. (The), Bridgeport, Conn. **33.**
Automatic Clamp Co., Wauseon, O.
Batavia Clamp Co., Batavia, N. Y.
Buffalo Last Works, Buffalo, N. Y.
Chester Steel Castings Co., 407 Library st, Phila., Pa. **46.**
Cincinnati Tool Co. (The), Cincinnati, O.
Edwards, M. L. Mfg. Co. (The), Salem, O.
Gloeckler, B., 1119 Penn av., Pittsb'g, Pa.
Kraiss, Andrew & Co., Wellsville, O.
Myers, F. E. & Bro., Ashland, O.
Northrup, H. J., Lansingburg, N. Y.
Smith, Otis, A., Rockfall, Conn.
Stearns, E. C. & Co., Syracuse, N. Y.
Warner, G. F. Mfg. Co. (The), 212-228 East st., New Haven, Conn.
Werum Bros., 48 Summit st., Toledo, O.
Woodruff, Miller & Co., Mt. Carmel, Conn.

Cleaners—Pipe, Tube and Flue.

Adams, F. F. & Co., Erie, Pa.
Chalmers-Spence Co., 419 8th st., N. Y. **iv.**
Campbell, W. W., 85 Liberty st., N. Y.
Cleveland Flue Cleaner Mfg. Co., 47 Power Blk., Cleveland, O.
Cook & Co. (Lit.), 22 Cortlandt st., N. Y.
Hotchkiss, James F., 120 Liberty st., N. Y. **68.**
International Mfg. Co., 270 Pearl st., Cleveland, O.
Kelley, J. L., 1114 State st., Erie, Pa.
Kendall Mfg. Co., 53 Mechanic st., Buffalo, N. Y.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Read, Edward B., 61 1st st., San Francisco, Cal.
W. S. Rhodes, 110 E. Indiana st., Chic., Ill.
Watertown Steam Blower Co, 35 Liberty st., N. Y.

Cleats—Boat.

Allen & Co., 140-142 E. 41st st., N. Y.
Corbin, P. & F., New Britain, Conn.
Meyer, Curt W., 357 4th av., N. Y.
Vanstone Mfg. Co., Providence, R. I.
Warner, G. F., Mfg. Co. (The), 212-228 East st., New Haven, Conn.

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Clippers—Belt and Rivet.

Chambers Bros. & Co., Philadelphia, Pa.
Porter & Wooster, Boston, Mass.
Schenck's Adjustable Fireback Co., Chic., Ill.

Clippers—Horse.

McDonald, Chas. 231 W. 60th st., N. Y.
Montgomery & Co , 105 Fulton st., N. Y.
Richardson, Wm., 213 W. 51st st., N. Y.
Walker, Adam, 213 W. 50th st., N. Y.

Clocks—Electric.

Auburn Electric Clock Co., 3 Green st., Auburn, N. Y.
American Watchman's Time Detecter (The), 234 Broadway, N. Y.; 832 Sheriff st., Cleveland, O..
Boston Electric Co., 548 Washington st., Boston, Mass.
Buerk, J. E., 230 Washington st., Boston, Mass.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Central Electric Co., 38 La Salle st., Chic., Ill.
Eco Magneto Clock Co., 105 Summer st., Boston, Mass. **76.**
Electric Gas Lighting Co., 35 Arch st., Boston, Mass.
Electric Standard Time Co., Boston, Mass.
Hansburg, O. E., 71 Nassau st., N. Y.
Holmes' Burglar Alarm Telegraph Co., 518 Broadway, N. Y.
Rhode Island Telephone and Electric Co., 54 Westminster st., Providence, R. I.
Hoppe, Paul F., 107 Liberty st., N. Y.
Howard, E., Watch & Clock Co. (The), 378 Washington st., Boston, Mass.
Imhauser, E., 206 Broadway, N. Y. **59.**
New Haven Clock Co., 16 Park pl., N. Y.
Standard Electric Time Co., 342 State st., New Haven, Conn.
Standard Watchman's Clock, 71 Nassau st., N. Y.

Clocks—Marine.

American Steam Gauge Co., 36 Chardon st. Boston, Mass.
Crosby Steam Gauge & Valve Co., 95-97 Oliver st., Boston, Mass.

Cloth—Battery.

Eastwood Wire Mfg. Co., Belleville, N. J.

Cloth Bolting.

Bell, J. J., 32 S. William st., N. Y.
Bradford Mill Co., Evans, S. of 8th st., Cincinnati, Ohio.
Bradford, T. & Co., 174 W. 2d st., Cincinnati, O.
Brigham, S. O., 27 Park pl., N. Y.
Carey, S., 17 B'way, N. Y.
Crandall. L. S., ft. Grand Division st., Silver Creek, N. Y.
Dandliker, R. A., 64 S. Clinton st., Chicago, Ill.
Eastwood Wire Mfg. Co., Belleville, N. J.
Elder, S. & Co., 34 N. Howard st., Baltimore, Md.
Ernest, J. J., 41 B'way, N. Y.
Estey W. Shepard, 71 Fulton st., N. Y.
Gale, G. R., Cleveland, O.
Holmes & Blanchard, 37 Charlestown, st., Boston, Mass.
Huntley & Hammond, Silver Creek, N. Y.
Kohn & Bohner, 351 B'way, N. Y.
Kress & Co., 41 B'way, N. Y.
Latimer & Co., 33 N. Front st., Phila., Pa.
Livingston, W. & F., 391 Greenwich st., N. Y.
Miller, C. F., Mansfield, O.
Morris & Trimble, W. Falls av., n. Pratt st., Balt., Md.
Nordyke & Marmon Co., Indianapolis, Ind.
Noye, John T. Mfg. Co. (The), Buffalo, N. Y.
Pfister, J. J., 120 Sutter st., San Francisco, Cal.
Pyne, W. T., 1036 W. Main st., Louisville, Ky.
Sharp, J., 59 Walnut st., Cincinnati, O.
Stout, Mills & Temple, Dayton, O.
Wagner, J. & Co., 105 Mission st., San Francisco, Cal.
Williams, G. A., 85 Fulton st., N. Y.

Clothing—Horse.

Ayres, Wm. & Sons, 21 Thomas, N. Y.
Chase, L. C. & Co., 388 B'way, N. Y.
Kelly, Patrick J., 68 Dey st., N. Y.
Kelsey, Albert, 28 Warren st., N. Y.
Knox, Wm., 128 Chambers st., N. Y.
Langstroth, Theodore W., 76 Beekman st., N. Y.
Livingston Bros., 63 Baxter st., N. Y.
Riley, Wm. B. & Co., 52 Leonard st., N. Y.
Short, Wm. G. & Co., 27 Warren st., N. Y.
Spear & Co., 78 Warren st., N. Y.
Spillman, Frederick, 217 William st., N. Y.
Vannest, A. R. & Co , 54 Warren st., N. Y.

Clothing—Oiled.

Ackland, T. R., 706 Swanson st., Phila., Pa.
Alder Bros. & Co., 748 E. Lombard st., Balt., Md.
Anderson, J., Gloucester, Mass.
Asher & Smith, 325 Davis st., San Francisco, Cal.
Bangs, A. K., Portland, Me.
Bracken, J. P., 130 Bainbridge st., Phila., Pa.
Brown, J., Gloucester, Mass.
Cape Ann Oil Clothes Co., Rockport, Mass.
Cape Ann Oil Clothing Co., 748 E. Lombard st., Balt., Md.
Carpenter & Co., Geo. B., 202 S. Water st., Chicago, Ill. **31.**
Carter, C. F. & Co., Gloucester, Mass.
Carter, John F., Beverly, Mass.
Carter, J. F., 9 Lispenard st., N. Y.
Carter Oiled Clothing, 123 Chambers st., N. Y.
Clark & Millburg, 117 South st., N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Corliss, C. R., Gloucester, Mass.
Cosgrove, Thos., Malden, Mass.
Cosgrove & Leighton, Malden, Mass.
Cummings & Howes, Orleans, Mass.
Donovan, J., 134 Central st., Boston, Mass.
Duck Brand Co. (The), 199 Madison st., Chicago, Ill.
Ferrin, A. A., Woburn, Mass.
Frost, David O., Gloucester, Mass.
Furbush, E. M., Lynn, Mass.
Groubeck, A., 132 Cherry st., N. Y.
Harding, Dennis B., Gloucester, Mass.
Lewis & Kamp, 8 Fulton st., N. Y.
Lilles Mfg. Co., 40 W. Van Buren st., Chicago, Ill.
Logan, M. J., 901 S. Front st., Phila., Pa.
Lorsch & Heineman, 306 Canal st., N. Y.
Lynch, William, 535 W. 59th st., N. Y.
McNulty, J., 106 South st., Phila., Pa.
Maloney, T. & Co., 201 Atlantic av., Boston, Mass.
Marks, M., 52 Clay st., San Francisco, Cal.
Metropolitan Rubber Co., 452 B'way, N. Y.
Murray & Baker, 10 S. Jefferson st., Chicago, Ill.
Nelson, J., Gloucester, Mass.
Nickerson, L., Gloucester, Mass.
Oregon Oil Clothing Mfg. Co., Portland, Ore.
Pedrick, Thos. B., Swampscott, Mass.
Pratt, E. E. & Son, Norwich, Mass.
Ranney & Hodgman, St. Paul, Minn.
Ratner, L., 720 S. Charles st., Balt., Md.
Roberts Bros., Tower's Depot, 75-79 S. Market st., Chicago, Ill.
Rowe, J. H., Gloucester, Mass.
Rubber Clothing Co., 201 Atlantic av., Boston, Mass.
Sawyer, H. M. & Son, East Cambridge, Mass.
Segbers, B., 1278 De Kalb av., Brooklyn, N. Y.
Standard Oiled Clothing Co., 308 Canal st., N. Y.
Stanley, J., 140 South st., Phila., Pa.
Stiefel, Juhn & Cohen, Balt., Md.
Sutton, C., Jr. & Co., 32 California st., San Francisco, Cal.
Tower, A. J., Vernon and Simmons sts., Boston. Mass.
Underdown, A. R., 202 Market st., Phila., Pa.

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Wilde, W., Market, n. Lincoln st., Boston, Mass.
Williams, T. & Bro., 44 W. Randolph st., Chicago, Ill.
Wheeler, H., Gloucester, Mass.
Whelpley, R. T., 133 Lake st., Chicago, Ill.
Wolf Oil Clothing Co., St. Louis, Mo.

Clothing—Rubber.

American Rubber Co., 59 Franklin st., Boston, Mass.
Arcadia Rubber Co., 325 Washington st., Boston, Mass.
Barker & Camp, 27 Maiden la., N. Y.
Beacon Valley Rubber Co. (The), Naugatuck, Conn.
Boston Gossamer Rubber Co., 611 Washington st., Boston, Mass.
Boston Rubber Co., 63 Franklin st., Boston, Mass.
Carpenter & Co., Geo. B., 202 S. Water st., Chicago, Ill. **31.**
Chauncey Rubber Co., 33 Oliver st., Boston, Mass.
Clapp, C. N. & Co., 183 Devonshire st., Boston, Mass.
Cleveland Rubber Co., C. & P. & Nickel Plate R. R., Cleveland, O.
Cohen, Jacob, Rahway, N. J.
Conant Rubber Co., 26-28 Asylum st,, Hartford, Conn.
Dawson, J. W. & C. F., Chicago, Ill.
Dunlap, Roberts & Hall, 144-146 Lake st., Chicago, Ill.
Franklin Rubber Co., 21-23 Franklin st., Boston, Mass.
Goodyear's India Rubber Glove Mfg. Co., 503-505 B'way, N. Y.
Goodyear's Rubber Co., 487 B'way, N. Y.
Gossamer Rubber Clothing Co., 300 Federal st., Boston, Mass.
Hodgman & Co. 459 B'way, N. Y.
Hodgman Rubber Co., 32 School st., Boston, Mass.
Home Rubber Co., Trenton, N. J.
Johnston, Fred H., Saratoga Springs, N. Y.
Metzger Rubber Co., New Haven, Conn.
Mystic Rubber Co., 82 Chauncey st., Boston, Mass.
National Rubber Co., Wood st., Bristol, R. I.
Ohio Belting & Supply Co., Cleveland, O.
Para Rubber Shoe Co., 26 High st., Boston, Mass.
Rubber Clothing Co., 100 Congress st., Boston, Mass.
Standard Rubber Co., 40 Bedford st., Boston, Mass.
Underdown, A. R., 202 Market st., Phila., Pa.
Ward, C. C., 121 Leonard st., N. Y.

Clutch Elevator—Attachments.

Maslin, J. & Son, 165 1st st., Jersey City, N. J.

Coal Elevator Scuttles.

Dickson Mfg. Co., Scranton, Pa.

Coal Wedgers.

Lancaster, James H., 187 B'way, N. Y. **4.**

Coal Miners and Shippers.

Abbey Coal & Mining Co., Collinsville, Ill.
Abels, H. & Co., Cleveland & Canton R'y docks, Cleveland, O.
Acadia Coal Co., 86 State st., Boston, Mass.; 1 B'way, N. Y.
Acushnet Coal Co., New Bedford, Mass.
Advance Coal Co., 3 Smithfield st., Pittsburgh, Pa.
Aechternacht, H. & A., 111 B'way, N. Y.
Ætna Coal Co., 174 N. Clark st., Chicago, Ill.
Albright Coal Co., 3 Prospect st., Cleveland, O.
Alexandria Coal Co., 216 S. 3d st., Phila., Pa.
Allen, R. W. P., 341 Walnut st., Phila., Pa.
Allen's, S. Sons, Superior, c. S. Water st., Cleveland, O.
Alliance Coal Mining Co., 226 S. 3d st., Philadelphia, Pa.
Alpers & Swarthout, 111 Broadway, N. Y.
Alps Coal Co., 142 Water st., Pittsburgh, Pa.
Altmeyer, G., 134 Water st., Pittsburgh, Pa.
American Coal Co., 1 Broadway, N. Y.; 20 Central st., Boston, Mass.; Cannelton, Ind.
American Diamontine Stone, Coal, Iron & Clay Co., N. 6th, c. Arch st., Philadelphia, Pa.
Anderson & Day, 16 Smithfield st., Pittsburgh, Pa.
Andrews, C. H. & W. C., Youngstown, O.
Andrews, Hitchcock & Co., 101 St. Clair st., Cleveland, O.
Anspach, J., 122 S. 3d st., Philadelphia, Pa.
Ardary, F., Liberty av. and 31st st., Pittsburgh, Pa.
Armstead, J. P. & Co., St. David, Ill.
Armstrong, C. F., 10 Smithfield st., Pittsburgh, Pa.
Armstrong, F., 4th av. and Try st., Pittsburgh, Pa.
Armstrong, J. R., 275 Dearborn st., Chic., Ill.
Armstrong & Co., Liberty av. and 29th st., Pittsburgh, Pa.
Arnold Coal Co. (Ltd.), 136 1st av., Pittsburgh, Pa.
Athens Coal Co., Astoria, Ill.
Atlanta Coal Co., Atlanta, Ill.
Atlantic and George Creek Coal Co., 30 Kilby st., Boston, Mass.; 206 W. Baltimore st., Balt., Md.
Auburn Coal and Tile Co., Auburn, Ill.
Ayres & Bro., 216 Walnut st., Philadelphia, Pa.
Babcock, H. H., 149 W. Main st., Rochester, N. Y.
Babcock, Norris & Co., 99 St. Clair st., Cleveland, O.
Bacon, J. M., 329 Walnut st., Philadelphia, Pa.
Baker Bros., 92 Washington st., Chicago, Ill.
Baker, Whiteley Coal Co., 5 Rialto Bldg., Baltimore, Md.
Ballard & Ballard, Ashborough, Ind.
Baltimore Coal Co., 2 South st., Baltimore, Md.
Bain, G., 78 W. Erie st., Chicago, Ill.
Bannon & Murfin, Coalton, Ohio.
Barber, D. C. & Son, Tamaroa, Ill.
Barclay Coal Co., 154 S. 4th st., Phila., Pa.
Barker & Co., Toledo, O.
Barnard Coal & Transportation Co., Chester, Ill.
Barnhisel, D., 150 W. River st., Cleveland, O.
Barret, C. S., 44 Mercantile Bank Bldg., Cleveland, O.
Barrington, C. & Co., 430 Walnut st., Phila., Pa.
Barritt, S. H., 205½ Walnut st., Phila., Pa.
Barter, White & Davenport, Harrisburg, Ill.
Bartlett Coke & Coal Co., 20 S. 2d st., Phila., Pa.
Barwell & Carter, Pinckneyville, Ill.
Bass, C. H., 3 Bowling Green, N. Y.
Bates, W. H. & Co., Winchester, Ill.
Beard, Proads & Walters, Holliday, Ill.
Beatty, H. & Co., 323 Walnut st., Phila., Pa.
Beaver Branch Coal Co., 333 Walnut st., Phila., Pa.
Beaver Creek & Cumberland River Coal Co., 49 W. 3d st., Cincinnati, O.
Beaver Run Coal Co., 48 Wilshire Bldg., Cleveland, O.
Bell, Lewis & Yates, 18-21 Coal & Iron Exch., Buffalo, N. Y.
Belloni & Co., 41 South st., N. Y.
Bemis & Collins, Springfield, Mass.
Benedict & Co., 80 Church st., New Haven, Conn.
Benedict & Downes, 82 Church st., New Haven, Conn.
Benson, W., North Alton, Ill.
Birmingham Coal Co. (Ltd.), 2014 Josephine st., Pittsb'g, Pa.
Bernadon, F. F., 224 S. 3d st., Phila., Pa.
Bernice Coal Co., 204 Walnut st., Phila., Pa.
Berwind White Coal Mining Co., Bullitt Bldg., Phila., Pa.; 19 Congress st., Boston, Mass.; 55 B'way, N. Y.
Big Black Creek Pavement Co., 315 Walnut st., Phila., Pa.
Bigley, G. C. & Co., 134 Water st., Pittsb'g, Pa.
Bigley, N. J., 134 Water st., Pittsb'g, Pa.
Black, A., Liberty av., n. 31st st., Pittsb'g, Pa.

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Black, Sheridan & Wilson, 6 Chamber of Com. Balt., Md.
Blackburn Bros., 134 Water st., Pittsb'g, Pa.
Blackburn & Jones, 30 Ontario st., Albany, N.Y.
Blaen Avon Coal Co., 30 Kilby st., Boston, Mass.
Blair Iron & Coal Co., 218 S. 4th st., Phila., Pa.
Block Vein Coal Co., 110 Canal st., Cleveland, O.
Blood, G. A., 52 B'way, N. Y.
Bohannan, T., 206 Walnut pl., Phila., Pa.
Borda, E., 326 Walnut st., Phila., Pa.
Borden Mining Co., 102 State st., Boston, Mass.
Borden & Lovell, 71 West st., N. Y.
Bosley, D., Nyesville, Ind.
Bowen, J. A., Fall River, Mass.
Bowlesville Mining Co., Bowlesville, Ill.
Bowns, H. R., 111 B'way, N. Y.
Boyce, J., 1 Chamber of Commerce, Balt., Md.
Boyd, J. & Co., 308 Walnut st., Phila., Pa.
Braceville Coal Co., Braceville, Ill.
Brackebrush, A. C. & Co., 59 Dearborn st., Chicago, Ill.
Branham & Co., Indianapolis, Ind.
Braun, C. A., 140 S. 4th st., Phila., Pa.
Brazil Block Coal Co., 164 Dearborn st., Chicago, Ill.; Brazil, Ind.
Brazil & Chicago Coal Co., Carbon, Ind.
Breese Mining Co., Breese, Ill.
Brennan, C. L., hd. S. 13th st., Pittsburgh, Pa.
Briggs, J. N., 48 N. Pearl st., Albany, N. Y.
Briggs, M. & Co., 118 Water st., Pittsburgh, Pa.
Bright, F. D. & Co., 242 S. 3d st., Phila., Pa.
Broad Top Semi-Anthracite Coal Co., 320 Walnut st., Phila., Pa.
Broadhurst, J., Macksville, Ind.
Brooks, W. B. & Son, 17 E. State st., Columbus, Ohio.
Brown, F., Belleville, Ill.
Brown, W. H. Sons, 113 Water st., Pittsburgh, Pa.; Front and Lawrence sts., Cincinnati, O.; 604 S. 4th st., St. Louis, Mo.
Brueggeman & Blome, Belleville, Ill.
Bryant Coal Co., 40 Ashland Blk., Chicago, Ill.
Bryden Coal & Coke Co., 6th, c. Locust st., St. Louis, Mo.
Buck, J., Morris, Ill.
Buck Mountain Coal Co., 320 Walnut st., Philadelphia, Pa.
Buckeye Cannel Coal Co., Cannelburgh, Ind.
Buckeye Creek & Iron Co., 13½ N. High st., Columbus, O.
Buena Vista Coal Co., ft. 17th st., Pittsb'gh, Pa.
Buffalo Coal Co., 40 Coal & Iron Exch., Buffalo, N. Y.
Buffington, S. R. & Co., Fall River, Mass.
Burch, J. G., 663 Central av., Albany, N. Y.
Burroughs & Dutton, 125 S. 5th st., Phila., Pa.
Cahaba Coal & Coke Co., 58 S. 3d st., Phila., Pa.
Cairo City Coal Co., Cable, Ill.
Caledonia Coal Co., 108 Water st., Pittsburgh, Pa.
Caledonia Coal & Railway Co., 47 Equitable Bldg., Boston, Mass.
Calvert Coal & Iron Co., 400 Chestnut st., Phila., Pa.
Camden Coal & Improvement Co., 72-74 B'way, N. Y.
Cameron Iron & Coal Co., 5½ Pine st., N. Y.
Campbell's Creek Coal Co., ft. of Woods st., Cincinnati, O.
Cannelton Coal Co., 400 Chestnut st., Phila., Pa.
Canton Coal Co., Canton, Ill.
Carbondale Coal & Coke Co., Murphysboro, Ill.
Card, H. P., 44 Euclid av., Cleveland, O.
Card, J. F., 36 Mercantile Bank Bldg., Cleveland, Ohio.
Carlinville Mining Co., Carlinville, Ill.
Carter, W. T. & Co., 302 Walnut st., Phila., Pa.
Cartside Coal Co., 514 Pine st., St. Louis, Mo.
Castner & Co. (Ltd.), 203 Walnut st., Phila., Pa.
Castner & Curran, 1 B'way, N. Y.
Cato Coal & Iron Co., 30 Kilby st, Boston, Mass.
Cannelton Coal Co., 70 Kilby st., Boston, Mass.
Central Coal & Iron Co., 410 W. Main st., Louisville, Ky.
Central Valley Coal Co., Coalton, O.
Centralia Mining & Mfg. Co., Centralia, Ill.
Chappell, F. H., New London, Conn.
Chesapeake & Ohio Railway Coal Co., 150 B'way, N. Y.; 70 Kilby st., Boston, Mass.
Chicago, Joliet & Streator Coal Co., 31 Dearborn st., Chicago, Ill.
Chicago Mining & Mfg. Co., Braidwood, Ill.
Chicago, Wilmington & Vermillion Coal Co., 39 Commercial N. B. Bldg., Chicago, Ill.
Chicago & Columbus Coal Co., 175 Dearborn st., Chicago, Ill.
Chicago & Minonk Coal & Coke Co., 123 La Salle st., Chicago, Ill.
Chipman & Holt., 171 B'way, N. Y.
Church Hill Coal Co., Youngstown, O.
Chalfant, A. M., 2d & W. P. R. R. sh., Pittsb'g, Pa.
Chartiers Block Coal Co., 60 4th av., Pittsb'g, Pa.
Chartiers Valley Coal Co., 36 6th st., Pittsburgh, Pa.
Chipman, R. H., 216 S. 4th st., Phila., Pa.
Cincinnati Coal & Coke Co., Freeman av., ft. of 5th st., Cincinnati, O.
Cincinnati-Colorado Coal, Coke & Iron Co., 64 W. 3d st., Cincinnati, O.
Clampffer, W. K., 325 Walnut st., Phila., Pa.
Clark, W. M., 135 Water st., Pittsb'g, Pa.
Clearfield Consolidated Coal Co., 1 B'way, N. Y.; 216 S. 3d st., Phila., Pa.
Cleveland Coal Co., Cleveland, Ill.
Coal Bluff Mining Co., Carbon, Ind.
Coalfield Co. (The), Coal City, Ill.
Coal Ridge Improvement Co., 228 S 3d st., Phila., Pa.
Coal Run Co., Streator, Ill.
Coal Valley Coal Co., 141½ Water st., Pittsb'g, Pa.
Coal Valley Mining Co., Rock Island, Ill.
Colchester Coal Co., Colchester, Ill.
Collier, Budd & Co., Front, c. Harriet st., Cincinnati, O.
Collinsville Coal & Mining Co., Collinsville, Ill.
Columbus Coal & Mining Co., Columbus, O.
Columbus & Hocking Coal & Iron Co., Toledo, O.; 3 Deshler Blk., Columbus, O.
Comet Coal Co., Wellston, O.
Communipaw Coal Co., 111 B'way, N. Y.
Comstock Bros., 175 Dearborn st., Chicago, Ill.
Connecticut Western Coal Co., 446 Asylum st., Hartford, Conn.
Connellsville Gas Coal Co., 333 Chestnut st., Phila., Pa.
Conrad, H., 140 S. 4th st., Phila., Pa.
Consolidated Coal Co., 221 E. German st., Balt., Md.; 175 Dearborn st., Chicago, Ill.
Consolidated Coal & Mining Co., 33 W. Pearl st., Cincinnati, O.
Consolidation Coal Co., 71 B'way, N. Y.; 85 State st., Boston, Mass.
Cook, A. T., Front, c. B'way, Cincinnati, O.
Coonley & Waldron, 46 Schuyler st., Albany, N. Y.
Co-operative Coal Co., Ridgely, Ill.
Corcoran, J. J., 298 Vanburen st., Chicago, Ill.
Cornet Coal Co., Coalton, O.
Coxe Bros. & Co., 206 Walnut pl., Phila., Pa. 1; B'way, N. Y.
Cox Coal Mining Co., Tamaroa, Ill.
Coxe & Rockwell, 1 Broadway, N. Y.
Cranberry Iron and Coal, 237 S. 3d st., Phila., Pa.
Crawford & West, Brazil. Ind.
Crellin, T. R. & Co., 207 Walnut pl., Phila., Pa.
Crewes, J., Streator, Ill.
Cronin Bros., Morris, Ill.
Crook, J. D., Hurtz & Co., 1 Broadway, N. Y.
Crowson, Watts & Co., North Alton, Ill.
Cuba Union Coal Co., Cuba, Ill.
Cummings Bros., Portland, Me.
Cumberland & Elk Coal Co., 30 Kilby st., Boston, Mass.
C. W. & V. Coal Co., Braidwood, Ill.
Dahlem, J. P., 216 Frankstown av., Pittsburgh, Pa.
Dana Bros., ft. Wood st., Cincinnati, O.
Darlington, O., 325 Walnut st., Phila., Pa.
Davis, T., 366 W. Lake st., Chicago, Ill.
Davis, Brown & Co., Youngstown, O.
Decatur Coal Co., 234 S. 4th st., Phila., Pa.; Decatur, Ill.

The numbers following names indicate page on which the firm advertises.

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Delaware, Lackawanna & Western R. R. Co., ft. Erie st., Buffalo, N. Y.
Delaware & Hudson Canal Co., 5-6 Chapin Blk., Buffalo, N. Y.; 85 State st., Boston, Mass.; 2 Mech. Blk., Cleveland, O.; 8 Borden Blk., Chicago, Ill.
Dennison Coal Co., 44 Mercantile Bank Bldg., Cleveland, O.
Despard Coal Co., 225 E. German st., Balt., Md.
Despard Gas Coal Co., 60 Congress st., Boston, Mass.
Devoy & Feuerborn, 423 Chestnut st., St. Louis, Mo.
De Witt, P. & Co., 111 Broadway, N. Y.
Diamond Coal Co., 134 Water st., Pittsb'gh, Pa.
Dickinson, W. C., 6 W. Main st., Rochester, N. Y.
Diekmann Coal Co., 13th and Tyler sts., St. Louis, Mo.
Dickson, Stewart & Co., 1503 Liberty av., Pittsburgh, Pa.
Diggs Bros., 2 South st., Baltimore, Md.
Dodson, Weston & Co., 204 Walnut st., Philadelphia, Pa.
Donaldson, J., 226 Walnut st., Phila., Pa.
Donaldson & Duncan, 226 Walnut st., Phila., Pa.
Donaldson & Thomas, Union Depot, New Haven, Conn.
Donk, E. W. & Co., 217 N. 8th st., St. Louis, Mo.
Donk & Bro., Pinckneyville, Ill.
Donnelly, James B., Oswego, N. Y.
Donohue, W. P. & Co., 31st st., Chicago, Ill.
Dorsey, B. L. & Sons, Gillespie, Ill.
Drake, H. F. & Co., 48 Arcade st., Rochester, N. Y.
Dreiske, William, Mendell, c. Crossing st., Chicago, Ill.
Drew & Wasson, Indianapolis, Ind.
Drew & Wasson Mining Co., Brazil, Ind.
Drury, E., Drury, Ill.
Dubois, J. S., 210 Walnut st., Phila., Pa.
Duffy, J. T., Water, c 3d st., Louisville, Ky.
Duffy, M., 134 Water st., Pittsburgh, Pa.
Duger & Neal, Bloomfield, Ind.
Duncan, D. & Son, 111 B'way, N. Y.; Union Depot, New Haven, Conn.
DuQuoin Coal Mining Co., DuQuoin, Ill.
Dwight Chenoa Mining Co., Dwight, Ill.
Dyer & Clark, 97 Dearborn st., Chicago, Ill.
Eades, F., Streator, Ill.
Eades, J. & Son, Streator, Ill.
Eagle Coal Co., Coalton, Ohio.
Ebel, W. & Co., Belleville, Ill.
Ebervale Coal Co., 1 B'way, N. Y.
Edgar Coal Co., Perth, Ind.
Ehlen, J. F., North, c. Fayette st., Balt., Md.
Eldridge & Hyatt, 788 B'way, Albany, N. Y.
Elenich & Bro., Nyesville, Ind.
Eliza Furnace Coal & Iron Co., Wellston, O.
Elliot, E., 207 Walnut pl., Phila., Pa.
Elmwood Coal Co., Elmwood, Ill.
Ellsworth Coal Co., 175 Dearborn st., Chicago, Ill.; Danville, Ill.
Emerson, W. H. & Co., Astoria, Ill.
Emma Coal Co., Coalton, O.
Engert, G. & Co., 306 Exchange st., Rochester, N. Y.
Enterprise Coal Co., Du Quoin, Ill.; 311 Walnut st., Phila., Pa.
Enterprise Coal & Exchange, 1 B'way, N. Y.
Equality Coal Co., Equality, Ill.
Essex, W., Drury, Ill.
Eureka Coal Co., Braidwood, Ill.
Evans, R., Streator, Ill.
Evansville Coal Mining Co., Evansville, Ind.
Excelsior Coal Mining Co., 19 Congress st., Boston, Mass.
Fairmount Coal & Iron Co., 40 Coal & Iron Exchange, Buffalo, N. Y.; 108 S. 4th st., Phila., Pa.
Falls Creek Coal Co., 40 Coal & Iron Exchange, Buffalo, N. Y.
Fawcett, T. & Sons, 77 Water st., Pittsburgh, Pa.
Fayette Coal & Coke Co., 20 Nassau st., N. Y.
Fell, J. R., 237 S. 3d st., Phila., Pa.
Ferguson, W., Morris, Ill.
Feurhan & Co., Millstadt, Ill.
First Avenue Coal Mining Co., Evansville, Ind.
Fletcher Bros., Princeton, Ill.
Florence Dale Coal Co., 3 Bowling Green, N. Y.
Fluhart, T. & Co., Wellston, O.
Forest Coal Co., Coalton, O.
Fort Pitt Coal Co. (The), 1010 Penn av., Pittsburgh, Pa.
Foster, Clark & Wood, 86 Water st., Pittsburgh, Pa.
Fox, C. H., 217 Walnut st., Phila., Pa.
Fox Lake Coal Co., 164 Bank st., Cleveland, O.
Fox, T., 121 Wabash av., Pittsburgh, Pa.
Franklin Coal Co., 228 S. 3d st., Phila., Pa.
Frayer, S. A., Asylum, c. Spruce st., Hartford, Conn.
Frazer & Frye, 145 Water st., Pittsburgh, Pa.
Freeburgh Coal Co., Freeburgh, Ill.
French Co. (The), N. H. & Derby R. R. Depot, New Haven, Conn.
Fricke, H. C., Coke Co., 313 Walnut st., Phila.
Frisbie, Bissell & Co., 1 B'way, N. Y.
Fry, G. W., 202 Walnut st., Phila., Pa.
Fuhrman, J. B., 133 Jefferson st., Cleveland, O.
Fulton Coal Co., 407 Library st. Phila., Pa.
Garfield Coal Co. (Ltd.), 308 Walnut st., Phila., Pa.
Garfield & Proctor, Fitchburg, Mass.
Garrigues, F., 323 Walnut st., Phila., Pa.
Gartsherrie Coal & Mining Co., 108 Dearborn st., Chicago, Ill.
Gartside Coal Co., Murphysboro, Ill.
Gaston Gas Coal Co. (The), 1 Chamber of Com. Bldg., Balt., Md.
Gawthrop, H. & Co., 1 B'way, N. Y.; 308 Walnut st., Phila., Pa.
Gay & Parker Co., 30 Kilby st., Boston, Mass.
Geissinger, J. B., 49 B'way, N. Y.
Gelwick & Richards, Belleville, Ill.
George, J. L., 921 Liberty av., Pittsb'g, Pa.
George's Creek Coal & Iron Co., 29 Chamber of Com., Balt., Md.
Gerrard Coal Co., 131 Ontario st., Cleveland, O.
Gibbons & Burtans, 591 Central st., Albany, N. Y.
Gilbert, W. F., 65 Church st., New Haven, Conn.
Gillespie Coal Co., Gillespie, Ill.
Gillespie, E. A. & F. B., 111 B'way, N. Y.
Gillham & Dana, ft. of Wood st., Cincinnati, O.
Gillingham, R. P. & Son, 237 S. 3d st., Phila., Pa.,
Gilmore, J., 110 Water st., Pittsb'g, Pa.
Girard, Coal & Tile Co., Girard, Ill.
Glen White Coal & Lumber Co., 21 S. Gay st., Balt., Md.
Glidden & Drake, 41 Atwater Bldg., Cleveland, Ohio.
Globe Coal Co., Fall River, Mass.; 8 Wood st., Pittsb'g, Pa.
Goff-Kirby Coal Co., 243 Superior st., Cleveland, Ohio.
Goodrich & Co., Cambridge, Ill.
Goold Ridge Coal Co., Morris, Ill.
Gosline & Barbour, Toledo, O.
Gowrie Mines (F. H. Odiorne & Co.), 86 State st., Boston, Mass.
Graeff, Wilcox & Co., 1 B'way, N. Y.; 318 Walnut st., Phila., Pa.
Grand Lake Coal Co., 147 4th av., Pittsb'g, Pa.
Grant Coal Co., Burnet, Ind.
Grand Tower Mining & Transportation Co., Grand Tower, Ill.
Grape Creek Coal Co., 201 First Nat. Bk. Bldg., Chicago, Ill.
Green River Coal Mining Co., Green River, Ill.
Griffin, J., 918 S. Halsted st., Chicago, Ill.
Griffiths, S. P. & Co., 216 S. 3d st., Phila., Pa.
Gross, H. S., 201 Walnut st., Phila., Pa.
Guild Pendergast & Co., High, c. Naghten st., Columbus, O.
Gumbert & Huey, 108 Water st., Pittsb'g, Pa.
Hackett, F. M. & Co., 179 Broadway, Albany, N. Y.
Hackett, T. & Co. (Ltd.), 417 Wood st., Pittsburgh, Pa.
Haddock, J. C., 1 Broadway, N. Y.
Haddock & Steel, Fall River, Mass.
Hall, A. A., 158 E. Naghten st., Columbus, O.
Hall Coal Co., Dayton, O.
Hall, J. F., Coalton, Ohio.
Hall, J. & Sons, 156 1st av., Pittsburgh, Pa.

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Hamilton, Hodge & Mouser, Wenona, Ill.
Hamilton, S. M. & Co., 14 S. Gay st., Balt., Md.
Hammond, L. M. & Co., 125 Halsted st., Chicago, Ill.
Hampton Coal Mines, 1425 Liberty av., Pittsburgh, Pa.
Hampton Coal Mining Co., Hampton, Ill.
Hanna City Coal Co., Hanna City, Ill.
Hanna, M. A. & Co., 101 St. Clair st., Cleveland, O.
Harder & Hafer, 24th st., c. Stewart av,, Chicago, Ill.
Harrison & Co., Nyesville, Ind.
Hart, H. E., 33 Broadway, N. Y.
Hartley & Marshall, W. Carson st., 36th Ward, Pa.
Hartwell, F. G., Coal Co,, 175 Dearborn st., Chicago, Ill.
Haseltine, Jacobs & Co., Youngstown, O.
Hathaway, J. L., 38 Market st., Chicago, Ill.
Hayden P. & Sons, Long, c. Spring st., Columbus, O.
Hays, W. S., 115 Water st., Pittsburgh, Pa,
Hays & Co., C. & P. R. R. Pier, Cleveland, O.
Hazzard, Wood & Co., 242 S. 3d st., Phila., Pa.
Heaton, G. W., 210 Walnut st., Phila., Pa.
Heaton, S. M. & Co., 210 Walnut st., Philadelphia, Pa.
Heberton, G. N., 311 Walnut st., Phila., Pa.
Heckscher, Richard, Jr., 435 E. 23d st., N. Y.
Hedstrom, E. L. & Co., 115 Dearborn st., Chic., Ill.
Heilner, P. & Son, 314 Walnut st., Phila., Pa.
Heilner & Son, 1 Broadway, N. Y.
Heisenbuttel, J. D. & Son, 111 Broadway, N. Y.
Heim & La Prant, Streator, Ill.
Hendricks, C., Drury, Ill.
Hengehold Coal Co., Front, c. Harriet st., Cincinnati, O.
Henkle & Cook, Hymera, Ind.
Herdein Coal Co., Galva, Ill.
Hicks, M. & M. W., Streator, Ill.
Highland Coal Co., 320 Walnut st., Phila., Pa.
Highnote & Co., Ashborough, Ind.
Hiles, J. & Co., 2 Chamber of Commerce Bldg., Balt., Md.
Hill & Foster, Princeton, Ill.
Hoboken Coal Co., 111 B'way, N. Y.
Hodgson, H. M., 134 Water st., Pittsb'gh, Pa.
Hooven, J. T., Dayton, O.
Horace Coal Mining Co., Horace, Ill.
Horner & Roberts, 120 Water st., Pittsb'gh, Pa.
Hotaling & Saxton, 55 B'way, Albany, N. Y.
Howard Coal Co., 967 N. Front st., Phila., Pa.
Howell, E. W., 380 Madison av., Albany, N. Y.
Hoyt, F. S., 1 B'way, N. Y.
Hoyte, G. B., 180 Hudson av., Albany, N. Y.
Hudson, G., Nyesville, Ind.
Hull, G. H. & Co., 500 W. Main st., Louisville, Ky.
Humboldt Coal Co., 228 S. 3d st., Phila., Pa.
Hunter, W. H., Joliet, Ill.
Hutchinson & Ingbest, Carbon, Ind.
Hutson Coal Co., 67 Wilshire Bldg., Cleveland, O.
Illiana Coal Co., Illiana, Ill.; Indianapolis, Ind.
Illinois Fuel Co., Joliet, Ill.
Illinois Central Iron & Coal Mining Co., St. John, Ill.
Illinois Valley Coal Co., Oglesby, Ill.; 5 Ashland Blk., Chicago, Ill.
Imperial Coal Co., 7th av. and Smithfield st., Pittsb'gh, Pa.
Indian Creek Coal Co., Vincennes, Ind.; Rockwell, Ind.
Indiana Briar Hill & Coal Mining Co., Clinton, Ind.
Ingham, W. H., 308 Walnut st., Phila., Pa.
Ingle, D., Indianapolis, Ind.
Ingle, J. & Co., Evansville, Ind.
Intercolonial Coal Co., 85 State st., Boston, Mass.
International Coal Co., 103 State st., Boston, Mass.
Irvona Coal Co., 216 S. 3d st., Phila., Pa.
Irwin, S., 406 Walnut st., Phila., Pa.
Irwin & Co., 1602 Liberty av., Pittsb'g, Pa.
Jackson Coal & Mining Co., Brazil, Ind.
Jackson, W. J. & Co., 429 Walnut st., Phila., Pa.
Jefferson, A., Streator, Ill.
Jenkins, T. M. & Co., 117 Water st , Pittsb'g, Pa.
Johnson, S. M. & Son, 49 S. Gay st., Balt., Md.
Jones, D. & Bro., North Alton, Ill.
Jones & Greiner, 4th av. & Try st., Pittsb'g, Pa.
Jones & Nisbet, Coultersville, Ill.
Jourdan, W. H. & Co., 366 Main st., Worcester, Mass.
Judge's, J. Sons, Champlain, c. North st., Albany, N. Y.
Jumbo Coal & Coke Co., 708 Penn av., Pittsb'g, Pa.
Jutte, C., 118 Water st., Pittsb'g, Pa.
Kaehler, F., 847 Clybourn av., Chicago, Ill.
Kay, Long & Lansadder, Coal Bluff, Ind.
Kelly, J. J., 14th, c. Dearborn st., Chicago, Ill.
Kelly, E. S., Coalton, O.
Kewin Coal Co., 175 Dearborn st., Chicago, Ill.
Kemp, H. & Co., North Alton, Ill.
Kennedy, D. J., 6361 Station st., Pittsb'g, Pa.
Kennedy, J., 125 Water st., Pittsb'g, Pa.
Kent & Mordue, Kenyon Bldg., Louisville, Ky.
Kerwin Coal Co., 175 Dearborn st., Chicago, Ill.
Kuecken, W. & Co., 170 Washington st., Chicago, Ill.
Keystone Coal Co., 209 S. 3d st., Phila., Pa.
Kimberly, Enos S., 111 Church st., New Haven, Conn.
Kineon, S. P., Smith, c. Water st., Cincinnati, O.
Kissam & Randolph, 1 B'way, N. Y.
Kittanning Coal Co., 333 Walnut st., Phila., Pa.
Knevals, C. B., 21 Cortlandt st., N. Y.
Krauss, E. G. & Co., 3 Euclid av., [redacted]eland, O.
Kloess, J., Belleville, Ill.
Lake Shore Gas Coal Co., 141 Water st., Pittsb'g, Pa.
Lammot, D. & Co., 406 Walnut st., Phila., Pa.
Langdon, W. D., 134 S. 4th st., Phila., Pa.
Latimore, C. D. & Bro., Brady, n. Tostin st., Pittsburgh, Pa.
Laurel Hill Coal Co., High, c. Naghten st., Columbus, O.
Leasdale Coal Co., 95 5th av., Pittsburgh, Pa.
Leedom & Clymer, 218½ Walnut st., Phila., Pa.
Lehigh Coal & Navigation Co., 226 S. 3d st., Phila., Pa.
Lehigh Valley Coal Co., 228 S. 3d st., Phila., Pa.
Lewis, W. T., 155 S. 4th st., Phila., Pa.
Locust Gap Improvement Co., 407 Library st., Phila., Pa.
Locust Mountain Coal & Iron Co., 224 S. 3d st., Phila., Pa.
Long Valley Coal Co., 154 S. 4th st., Phila., Pa.
Lovedale Coal Works, 86 Water st., Pittsburgh, Pa.
Loyal Hanna Coal Coke Co., 1036 Penn av., Pittsburgh, Pa.
Lynn, J. & Co., 142 Water st., Pittsburgh, Pa.
Lynn, J. & Sons, 142 Water st., Pittsburgh, Pa.
Lynn, M. E., 134 Water st., Pittsburgh, Pa.
Lynch & Robinson, 134 Water st., Pittsb'gh, Pa.
Lysle, G. & Sons., 69 Water st., Pittsburgh, Pa.
Lacey Coal Mines, De Pue, Ill.
Lake View Coal Co., 233 Bank st., Cleveland, O.
Lancaster Block Coal Co., Terra Haute, Ind.
Langdon, A. & Co., 13-14 Coal & Iron Exchange, Buffalo, N. Y.; 175 Dearborn st., Chicago, Ill.
Langdon, J. & Co., 2 Chapin Blk., Buffalo, N. Y.
Langosch, C. L., 1248 Milwaukee av., Chicago, Ill.
La Salle Coal Mining Co., La Salle, Ill.
La Salle County Carbon Coal Co. (F. O. Wyatt, Mgr.), 5 Ashland Blk., Chicago, Ill.
Lathrop Coal & Mining Co., Kewanee, Ill.
Law, R. & Co., 196 Dearborn st., Chicago, Ill.
Lawson Coal Co., 163 Washington st., Chicago, Ill.
Lee, S. S. & Son, 38 S. Gay st., Balt., Md.
Lee, W. D., 47 B'way, N. Y.
Lehigh Coal & Navigation Co., 26 B'way, N. Y.
Lehigh Valley Coal Co., 90-92 Dearborn st., Chicago, Ill.; 1 B'way, N. Y.
Lehigh & Franklin Coal Co. (The), 175 Dearborn st., Chicago, Ill.
Lehigh & Wilkesbarre Coal Co., 160 Broadway, N. Y.; 60 Congress st., Boston, Mass.
Leonard & Youngman, Church, c. Madison st., Albany, N. Y.
Lewis, N., Drury, Ill.

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Lincoln Coal Mining Co., Lincoln, Ill.
Linderman, G. B. & Co , 1 Broadway, N. Y.
Lindsley & Co., 233 Bank st., Cleveland, O.
Lingen Mines, 86 State st., Boston, Mass.
Litchfield Coal Co., Litchfield, Ill.
Little & Yocum, Staunton, Ind.
Loveze & Co., Macksville, Ind.
Luther, G. W. & Sons, 45 Columbia st., Albany, N. Y.
Luzerne Coal Co., 1 Broadway, N. Y.
Lynch, J. H., 55 Rensselaer st., Albany, N. Y.
Lysle Bros. & Co., Front, ab. Freeman av., Cincinnati, O.
McConnell, J., 1st av., ab. Try st., Pittsburgh, Pa.
McCreary, G. D., 137 S. 2d st., Phila., Pa.
McCrickart, J. E. & Co., Water, n. Ross st., Pittsburgh, Pa.
McConnell, T., 2589 Gray's Ferry Road, Philadelphia, Pa.
McCue, M., 4th av., c. Try st., Pittsburgh, Pa.
McCullough, John G., Fayette, c. Park av., Baltimore, Md.
McCullough, R. G. & W., Hanna City, Ill.
McCurdy, Margerum & Co., Youngstown, O.
McDougal, Rider & Co., Peoria, Ill.
McElwain, J. M., ft. 7th st., Pittsburgh, Pa.
McEwan, W., 26 Clinton av., Albany, N. Y.
McGuire & Jager, 122 N. Sangamon st., Chicago, Ill.
McKillop, H. J., Drury, Ill.
McKinley & Downman, 315 Olive st., St. Louis, Mo.
McLean Co. Coal Co., Bloomington, Ill.
McMahon, G. W., Streator, Ill.
McNabb Coal & Coke Co., 36 W. 3d st., Cincinnati, O.
McNeill, C. G., 163 La Salle st., Chicago, Ill.
Mactier, W. L., 132 Walnut st., Phila., Pa.
Madeira, P. C., 430 Walnut st. Phila., Pa.
Mallory & Ross, Morris, Ill.
Mammoth Vein Coal & Iron Co., 407 Library st., Phila., Pa.
Mansfield Coal & Coke Co., 1042 Penn av., Pittsburgh, Pa.
Mansill, Battersby & Seville, Coal Valley, Ill.
Manufacturers' Coal Co., 101 St. Clair st., Cleveland, O.
Marissa Coal Co., Marissa, Ill.
Marmet Co. (The), Central av., c. Water st., Cincinnati, O.
Marshal, J. & Co., Streator, Ill.
Marshall, T. H. & Co., 97 Washington st., Chicago, Ill.
Martin, J. C., 230 S. 4th st., Phila., Pa.
Marvel, W. D. & Co., 70 William st., N. Y.
Maryland Coal Co., 35 B'way, N. Y.
Maryland Union Coal Co., 45 B'way, N. Y.; 1 Chamber Commerce Bldg., Balt., Md.
Matthews, C. L. & Co., 600 N. 24th st., Phila., Pa.
Mattiessen & Hegeler, La Salle, Ill.
Mattimore, T. & Son, 841 B'way, Albany, N. Y.
Mattoon Mining Co., Matoon, Ill.
Maule, J., Belleville, Ill.
Maurer, D. S. & Co., Stanton, Ind.
May, N. & Co., 708 Penn av., Pittsb'gh, Pa.
Mayo & Watson, 53 State st., N. Y.
Medora Coal Mining Co., Medora, Ill.
Meadow Run Coal & Iron Co., Willston, O.
Meeker & Co., 1 B'way, N. Y.
Meeker, Hedstrom & Co., Peoria, Ill.
Menge, F. A. & Co., W. 22d st., c. S. Ashland av., Chicago, Ill.
Mershon, W., 1 B'way, N. Y.
Metacomet Coal Co., Fall River, Mass.
Milesville Coal Co., 117 Water st., Pittsb'gh, Pa.
Mill Creek Coal Co., 115 B'way, N. Y.
Miller, G. J. & Bro., 142 Water st., Pittsb'gh, Pa.
Miller, J. & Co., Dresden, Ind.
Miller, R. G. & Co., 214 Bank st., Cleveland, O.
Millwood Coal & Coke Co., 209 S. 3d st., Phila., Pa.
Milnes, J., 132 Walnut st., Phila., Pa.
Milton Furnace & Coal Co., Wellston, O.
Mineral Spring Coal Co., 228 S. 3d st., Phila., Pa.
Mitchell, J., North Alton, Ill.
Mitchell, Lazar & Co., 14 Kilby st., Boston Mass.,
Mobery & Co., Atkinson, Ill.
Mobile Coal Co., Mobile, Ala.
Mohler & Kesinger, Coalton, O.
Monongahela Gas Coal Co., 35 German st., Balt., Md.
Monongahela & Peters Creek Co., 43 6th av., Pittsb'g, Pa.
Moody, W. F. & Son, 323 Walnut st., Phila., Pa.
Moon Mining Co., Du Quoin, Ill.
Morey Bros., 179 Elm st., Albany, N. Y.
Morgan, Moore & Baine, 50 Wilshire Bldg., Cleveland, O.
Morgan Run Coal & Mining Co., 12 Bratenahl Bldg., Cleveland, O.
Morier & McKindley, 185 Dearborn st., Chicago, Ill.
Morris, E. & Co., 101 St. Clair st., Cleveland, O.
Moser, A., 3 Euclid av., Cleveland, O.
Moses, E. A., 332 Walnut st., Phila., Pa.
Moshannon Coal Co., 200 Walnut pl., Phila., Pa.
Moutauk Gas Coal Co., 3 Bowling Green, N. Y.
Mount Olive Coal Mining Co., Mount Olive, Ill.
Munden B., Evansville, Ind.
Munhall Bros., 134 Water st., Pittsb'g, Pa.
Murphy, J. A., Dayton, O.
Murphy, L., 62 N. Market st., Chicago, Ill.
Naugle J. R., 39 2d st., Albany, N. Y.
Nashville Coal Co., Nashville, Ill.
National Coal Co. (Ltd.), 4th av., c. Try st., Pittsb'g, Pa.
National & Oak Ridge Coal Yard, 4th av., c. Try st., Pittsb'g, Pa.
Neal Bros., 2300 Cottage Grove av., Chicago, Ill.
Neelyville Coal Co., Neelyville, Ill.
Nell, J. S., 10 Smithfield st., Pittsb'g, Pa.
Nell & Walter, 610 Clinton av., Albany, N. Y.
Nelsonville Coal & Coke Co., 12 E. Broad st., Columbus, O.
Nevin, W. G., 218 Walnut st., Phila., Pa.
Nevins, J. D., 204 Walnut pl., Phila., Pa.
Newton, G. B. & Co., 308 Walnut st., Phila., Pa.
New Central Coal Co., 413 2d st., Balt., Md.; 79 State st., Boston, Mass,
N. Y. Central Coal Co. of Md., 111 B'way, N. Y.
New Lisbon Coal Co., Youngstown, O.
New Central Coal Co., 1 Broadway, N. Y.
Newburgh Orrel Coal Co., 1 Broadway, N. Y.; 33 S. Gay st., Balt., Md.
New Pittsburgh Coal & Coke Co., 94 Dearborn st., Chicago, Ill.
Newsam Bros., Orchard Mines, Ill.
N. Y. & Cleveland Gas Coal Co., 208 Wood st., Pittsburgh, Pa.; 122 Water st., Cleveland, Ohio.
New York & Cleveland Gas, Coal & Coke Co., 15 7th av., Pittsburgh, Pa.
N. Y. & Middle Coal Field R. R. Coal Co., 228 S. 2d st., Philadelphia, Pa.
N. Y. & Ohio Coal Co., 170 Superior st., Cleveland, O.
N. Y. & Perry Coal & Iron Co., 52 B'way, N. Y.
Niblock Coal & Mining Co., 116 Dearborn st., Chicago, Ill
Nichols & Co., Princeton, Ill.
Niven, MacM. & Co., 1 Broadway, N. Y.
Norman, D., North Alton, Ill.
Northwestern Coal Co., 185 Dearborn st., Chicago, Ill.
Northwestern Coal and Iron Co., 40 Coal and Iron Exchange, Buffalo, N. Y.
Norton, Chas. D. & Co., 328 Walnut st., Phila., Pa.
Oak Ridge Coal Co. (Ltd.), 4th av., c. Try st., Pittsburgh, Pa.
Oak Ridge Mining Co., 202 Main st., Buffalo, N. Y.
Odlorne, F. H. & Co., 86 State st., Baltimore, Md.
Oglesby Coal Co., La Salle, Ill.
Okawville Coal Mining Co., Okawville, Ill,
Ohio Central Co., Toledo, O.
Ohio Central Barge & Coal Co., Toledo, O.
Ohio Central Coal Co., Corning, O.
Ohio Coal Co., 44 Mercantile Bank Bldg., Cleveland, O.; Gillespie, Ill.
Ohio Coal Exchange, 22 E. Broad st., Columbus, O.
Ohio River Iron, Coal & Flux Co., 17½ W. 3d st., Cincinnati, O.

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Ohio & Penna. Coal Co., 164 Bank st., Cleveland, O.
O'Neil & Co., 11-12 Iron Exchange Bldg., Pittsburgh, Pa.
Orcutt, C. B., 150 Broadway, N. Y.
Ormsby Coal Co. (Ltd.), 242 S. 3d st.. Phila., Pa.
Osborne Coal Co., 101 St. Clair st., Cleveland, O.
Osceola Coal Co., 134 Water st., Pittsburgh, Pa.
Osler, J. L., 323 Walnut st., Phila., Pa.
Packer, E. A. & Co., 1 Broadway, N. Y.
Pana Coal Co., Pana, Ill.
Pardee, A. & Co. 102 State st., Boston, Mass.; 1 B'way, N. Y.; 237 S. 3d st., Phila., Pa.
Parke County Coal Co., 96 N. Ashland av., Chicago, Ill.
Porter, Wager & Co., Fairbury, Ill.
Parvin, W. L., 214 Walnut st., Phila., Pa.
Patterson Coal Co., Dayton, O.
Patterson, S. J., Dayton, O.
Payne, Newton & Co., 121 Superior st., Cleveland, O.
Peabody, Daniels & Co., Dearborn, c. Washington st., Chicago, Ill.
Peacock, H. W., 226 Walnut st., Phila., Pa.
Penney Coal Co., 134 Water st., Pittsburgh, Pa.
Penna. Coal Co. (Ltd.), 95 5th av., Pittsburgh, Pa.
Pennington, E., 234 Walnut pl., Phila., Pa.
Pennsylvania Coal Co., 257 Washington st., Buffalo, N. Y.; 1 B'way, N. Y.; 55 Dearborn st., Chicago, Ill.
Penn Gas Coal Co., 86 State st., Boston, Mass.; 209 S. 3d st., Phila., Pa.
Peoria Lime Stone & Coal Co., Peoria, Ill.
Perkins, F. P., 52 B'way, N. Y.
Perkins & Co., 228 Produce Exchange, N. Y.
Perry, A. W. & Co., Briar Bluff, Ill.
Perry County Coal Mining Co., St. John, Ill.
Phila. & Reading Coal & Iron Co., 70 Kilby st., Boston, Mass.; 227 S 4th st., Phila., Pa.; New Haven, Conn.; 33 S. Gay st., Balt., Md.; 3 Beaver st., N. Y.
Phillips, C. A. & Co., 7 W. Main st., Rochester, N. Y.
Phillips Coal Elevator Co., ft. of Mill st., Cincinnati, O.
Pickands, Mather & Co., 1 Mercantile Bank Bldg., Cleveland, O.
Piper, H. W. & Co., 413 Walnut st., Philadelphia, Pa.
Pioneer Coal Co., Front st., c. B'way, Cincinnati, O.
Pittsburgh & Chicago Gas Coal Co., 15 7th ave., Pittsburgh, Pa.
Pittburgh Coal & Mining Co., 1036 Penn av., Pittsburgh, Pa.
Pittsburgh & Southern Coal Co., 98 4th av., Pittsburgh, Pa.
Pittsburgh Tipple Co., 134 Water st., Pittsb'gh, Pa.
Pittsburgh & Western Coal Co., 325 Phœnix Bldg., Chicago, Ill.
Poland Coal Co., Youngstown, O.
Port Royal Coal & Coke Co., Youngstown, O.
Potomac Coal Co., 102 State st., Boston, Mass.; 6 Chamber of Com. Bldg., Balt., Md.
Potts, F. A. & Co., 116 Church st., New Haven, Conn.; 26 B'way, N. Y.
Powel, R. Hare & Co., 49 B'way, N. Y.; 70 Kilby st., Boston, Mass.; 419 Walnut st., Phila., Pa.
Powell, W. G. & Co., 424 Walnut st., Phila., Pa.
Powers, A. & W., Youngstown, O.
Powers, Brown & Co., Youngstown, O.
Prairie Creek Coal Shaft, Streator, Ill.
Priesmeyer, C., 515 Pine st., St. Louis, Mo.
Quay & White, 53 West st., Albany, N. Y.
Quincy Coal Co., Colchester, Ill.
Quinnimont Coal & Iron Co., 240 S. 3d st., Philadelphia, Pa.
Rafferty, T. C. & Co., 831 B'way, Albany, N. Y.
Rainey Bank Coal & Coke Co., 33 Mercantile Bank Bldg., Cleveland, Ohio.
Randall & McAllister, Portland, Me.
Rapids City Coal Co., Rapids City, Ill.
Reakirt Bro. & Co., 218½ Walnut st., Phila., Pa.
Reeb, N., Belleville, Ill.
Reed, J. M., 202 Walnut pl., Phila., Pa.
Reed, S. G., 156 1st av., Pittsburgh, Pa.
Reed, Stickney & Co., 11 S. Gay st., Balt., Md.
Reese, J. D., Streator, Ill.
Reevis, A. J., Drury, Ill.
Reichert, J., Freeburgh. Ill.
Reilly Bros., 26 S. 10th st., St. Louis, Mo.
Rend, W. P. & Co., 1129 Liberty av., Pittsburgh, Pa.; Columbus, O.
Reppller, J. G., 329 Walnut st., Phila., Pa.
Republic Coal Co., 134 Water st., Pittsburgh, Pa.
Rhodes & Berdler Coal Co., 209 Superior st., Cleveland, O.
Rhoads & Ramsey Co., 107 La Salle st., Chicago, Ill.
Rhoads & Shuster, 332 Walnut st., Phila., Pa.
Richmond Coal Mining & Mfg. Co., 30 Kilby st., Boston, Mass.
Richardson, O. S. & Co., 160 Kingsbury st., Chicago, Ill
Richardson & Co., Staunton, Ill.
Ricketts & Mathews, 64 N. High st., Columbus, Ohio.
Riddle, Dean & Co., 708 Penn av., Pittsburgh, Pa.
Ridgeview Coal & Coke Co., 267 S. 4th st., Phila., Pa.
Riley, L. A. & Co., 222 Walnut st., Phila., Pa.
Risher, J. & Co., 8 Wood st., Pittsburgh, Pa.
Ritchie, D. E. & Co., Peoria, Ill.
Rittenhouse & Co., Coalton, O.
River Bank Coal Co , Streator, Ill.
Riverview Coal & Mining Co., 1036 Penn av., Pittsburgh, Pa.
Roak, H., Morris, Ill.
Roanoke Mining Co., Roanoke, Ill.
Robb & Matthews, 205 Walnut pl., Phila., Pa.
Robbins, W. N. & Co., 142 Water st., Pittsburgh, Pa.
Roberts, H. C. & Co., 15 Powers' Bldgs., Rochester, N. Y.
Roberts, Howell & Co., Harrisburg, Ill.
Roberts, J. D., Streator, Ill.
Robinson, Haydon & Co., 1 B'way, N. Y.
Robinson, P., North Alton, Ill.
Rochester & Pittsburgh Coal & Iron Co., 615 Walnut st., Phila., Pa.; 20 Nassau st., N. Y.
Rock & Casey, Dallius, c. Cherry st., Albany, N. Y.
Rockhill Coal & Iron Co , 320 Walnut st., Phila., Pa.
Rodgers, C. & Co., Du Quoin, Ill.
Roehm Bros., Dayton, O.
Rogers, H. M., Torrington, Conn.
Rogers & Co., 90 Dearborn st., Chicago, Ill.
Rollinson, Kerr & Wallek, Morris, Ill.
Rothermel, L. M., 311½ Walnut st., Phila., Pa.
Rumsey, J. T. & Co., 82 Washington st., Chicago, Ill.
Rutledge, J., North Alton, Ill.
Rutter, D. & Co., 98 Dearborn st., Chicago, Ill.
St. Bernard Coal Mines, Gillespie, Ill.
St. Clair Coal & Coke Co. (Ltd.), 710 Penn av., Pittsb'g, Pa.
St. Libory Coal Co., St. Libory, Ill.
St. Louis Ore & Steel Co., Murphysboro, Ill.
Sackett, Smart & Co., 22 E. Broad st., Columbus, Ohio.
Saleneville Coal Co., 125 Public sq., Cleveland, Ohio.
Salisbury & Baltimore R. R. & Coal Co., 132 S. 3d st., Phila., Pa.
Saltsburg Coal Co., 108 S. 4th st., Phila., Pa.
Sand Creek Coal Co., Nyesville, Ind.
Sandoval Coal & Mining Co., Sandoval, Ill.
Sangamon Coal Mining Co., 17 Wabash av., Chicago, Ill.
Saville, J. & R., Canton, Ill.
Schroeter Coal Co., 212 Chouteou av., St. Louis, Mo.
Schutte, A. J., 95 5th av., Pittsb'g, Pa.
Schuyler, S. W., 177 B'way, Albany, N. Y.
Schuylkill & Lehigh Valley Coal Co., 1 B'way, N. Y.
Scott, J. C. & Sons, 335 Walnut st., Phila., Pa.
Sellers & Dilworth, 710 Penn av., Pittsb'g, Pa.
Seneca Coal Mining Co., Seneca, Ill.
Shackleton, E. I., 276 N. Clinton st., Rochester, N. Y.
Shackley & Dalton, Carbon, Ind.

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Shapter, L. U., 1 B'way, N. Y.
Shaner, Gas Coal Co. (Ltd.), 605 Liberty av., Pittsb'g, Pa.
Shaw Bro., 406 2d st., Balt., Md.
Shawnee Coal Co., 5 Deshler Blk., Columbus, O.
Sheafer, W. H., 612 Chestnut st., Phila., Pa.
Sheffield Mining Co., Sheffield, Ill.
Shelburn Coal Co., Shelburn, Ind.; Terre Haute, Ind.
Shoemaker, W. A. & Co., 179 S. High st., Columbus, O.
Sholl & Marmein, Peoria, Ill.
Shutterly, W. S., S. W. c. Front & Lawrence sts., Cincinnati, O.
Sidney Mines, 86 State st., Boston, Mass.
Siegrist, J. H., 313 Olive st., St. Louis, Mo.
Sill, F. N., Grand, c. Hamilton st., Albany, N. Y.
Silver Creek & Morris Coal Co., 170 Dearborn st., Chicago, Ill.
Slemmer, W. H. & Co., 218 Walnut st., Philadelphia, Pa.
Smith, C., 366 S. Pearl st., Albany, N. Y.
Smith, C. W., 311½ Walnut st., Phila., Pa.
Smith, H. J. & Co., 201 Walnut pl., Phila., Pa.
Smith, J. A., Sons, 817 N. 7th st., St. Louis, Mo.
Smith, R. C., Duquesne Way, n. 10th st., Pittsburgh, Pa.
Smith, R. Penn, 1 Broadway, N. Y.
Smith, Shirly, 19 Tremont Row, Boston, Mass.
Smith & McKee, 308 Walnut st., Phila., Pa.
Sneathon & Wilson, 106 Grant st., Pittsburgh, Pa.
Snell & Rowe, Oak Ridge, Ill.
Snodgrass, W. J. & Co., 8 Wood st., Pittsburgh, Pa.
Somers, J., Staunton, Ind.
Sondheimer, Beck & Co., 113 Monroe st., Chicago, Ill.
Souder, J., 210¼ Walnut st., Phila., Pa.
South Mount Olive Coal Mining Co., Mount Olive, Ill.
Southern Ohio Coal & Iron Co., Dayton, O.
Southwest Gas, Coal & Coke Co., 104 5th av., Pittsburgh, Pa.
Southwest Virginia Improvement Co., 244 S. 3d st., Phila., Pa.
Spalding, Mitchell & Co., 53 Dearborn st., Chicago, Ill.
Spofford, S. A., 406 Walnut st., Phila., Pa.
Spooner, G. C., 204 Walnut pl., Phila., Pa.
Spring Hill Coal Co., 43 6th av., Pittsburgh, Pa.
Spring Hill Coal & R. R. Co., 103 State st., Boston, Mass.
Staib, L., 74 Water st., Pittsburgh, Pa.
Standard Coal Co., Altoona, Ind.
Standish, W. P., 168 Greenwich st., N. Y.
Staples & Phillips, Taunton, Mass.
Starr, C. A., Dayton, O.
Star Coal Co., Streator, Ill.
Star Coal Mining Co., Du Quoin, Ill.
Stark & Coffey, Macksville, Ind.
Stearns, J. & Co., 25 La Salle st., Chicago, Ill.
Steen, D., Try st., c. 4th av., Pittsburgh, Pa.
Steinbach, M., 77 Lexington av., Albany, N. Y.
Sterling, E. J., 111 Broadway, N. Y.
Stern & Uhl, Franklin, c. Plum st., Albany, N. Y.
Stevens Coal & Mining Co., Harmony, Ind.
Stevens Mining Co., Carbon, Ind.
Stewart, Lewis & Dickson's, 230 2d av., Pittsburgh, Pa.
Stewart, T. B., 43d st., c. A. V. R. R., Pittsb'gh, Pa.
Stickney, Conyngham & Co., 1 B'way, N. Y.; 305 Walnut st., Phila., Pa.
Still, J., Morris, Ill.
Stockdale Coal Co., 95 5th av., Pittsb'gh, Pa.
Stone, D. & Co., ft. of Mill st., Cincinnati, O.
Stone, T. B. & Co., 129 Central av., Cincinnati, O.
Stoner & Co. (Ltd.), 143 Water st., Pittsb'g, Pa.
Stout Coal Co., 1 B'way, N. Y.
Stout, Van Wickle & Co., 170 Superior st., Cleveland, O.
Streator Coal Co., Streator, Ill.
Street, W. P., 111 Walnut st., Phila., Pa.
Stuart, Charles M., 40 Dallius st., Albany, N. Y.
Stuart, S. B. & Co., Rochester Savings Bank Bldgs., Rochester, N. Y.
Sumner, E. A., 396 Main st., Worcester, Mass.
Summit Bank Coal Co., 121 Superior st., Cleveland, O.
Sunday Creek Coal Co., 221 Dearborn st., Chicago, Ill.; Comstock's Opera House Blk., Columbus, O.
Swain Bros., 222 Walnut st., Phila., Pa.; 1 B'way, N. Y.
Sweetwater Coal Co., Sweetwater, Ill.
Swords, A. S. & Co., Asylum, c. Spruce st., Hartford, Conn.
Sydney & Louisburg R. Co., 103 State st., Boston, Mass.
Sylvester Coal Co., 416 Olive st., St. Louis, Mo.
Talbot & Phillips, 1 B'way, N. Y.
Tage, W. H., 99 Euclid av., Cleveland, O.
Taylor, A. & Co., 201 Walnut pl., Phila., Pa.
Taylor & Co., North Alton, Ill.
Taylor & McCoy, 21 S. Gay st., Balt., Md.
Telford, A. W., Morris, Ill.
Thatcher, A. T., Dearborn, c. Washington st., Chicago, Ill.
Thomas Bros. & Co., 1 B'way, N. Y.
Thomas Coal Co., 242 S. 3d st., Phila., Pa.
Tipton Run Coal Co., 333 Walnut st., Phila., Pa.
Titley, J. & J., 20 Division st., Chicago, Ill.
Tod, Stambaugh & Co., 6 Mercantile Bank Bldg., Cleveland, O.
Toudy, H. J., 329 Walnut st., Phila., Pa.
Tremont Coal Works, 36 Water st., Pittsburgh, Pa.
Trucks, J., 311½ Walnut st., Phila., Pa.
Tucker, Campbell & Co., 220 Walnut st., Phila., Pa.
Turnbull, J., 156 1st av., Pittsburgh, Pa.
Turner, J. S., Evansville, Ind.
Tuscawaras Coal Ass'n, 1 Superior st., Cleveland, O.
Tuscawaras Valley Coal Co., 28 Mercantile Bank Bldg., Cleveland, O.
Tyler, W. R., 320 Walnut st. Phila., Pa.
Ulrich, S., 311 Walnut st., Phila., Pa.
Union Coal Co., Peru, Ill.
United Coal & Coke Co., 605 Smithfield st., Pittsburgh, Pa.
Valentine & Armstrong, 226 S. 4th st., Phila, Pa.,
Valley Coal Co., 57 River st., Cleveland, O.
Valley Coal & Lime Co., 47th st. & A. V. R. R., Pittsburgh, Pa.
Van Dusen, Bro. & Co., 205½ Walnut st., Phila., Pa.
Vanes, J., Princeton, Ill.
Van Nostrand, J., 1 B'way, N. Y.
Van Velser, G. & J., Mineral, Ill.
Van Wickle, Stout & Co., 1 B'way, N. Y.
Victor Coal Co. (Ltd.), 216 S. 3d st., Phila., Pa.
Vienna Coal & Iron Co., Youngstown, O.
Virginia Coal & Water Co. (The), Virginia, Ill.
Virginia Tide Water Coal Co., 141 B'way, N. Y.
Wabash Coal Co., Quincy, Ill.
Wade Coal Co., 11 Bratenahl Bldg., Cleveland, Ohio.
Walker, J. H., 85 Washington st., Chicago, Ill.
Wallace & Bachelder, 774 B'way, Albany, N. Y.
Walnut Hills Coal Co., Court st., c. Broadway, Cincinnati, O.
Walton, J. & Co., 134 Water st., Pittsburgh, Pa.
Walter, J. M. & Co., Youngstown, O.
Walton, A. W., Princeton, Ill.
Walton Bros., Fairbury, Ill.
Walton Coal Co., 250 3d st., Louisville, Ky.
Wantling & Howarth, Edward's Station, Ill.
Warrington, G. H., 36 Mercantile Bank Bldg., Cleveland, O.
Warrick & Evansville Consolidated Coal Co., Evansville, Ind.
Waverly Coal & Coke Co., 134 Water st., Pittsburgh, Pa.
Watkins, D., Sanburn, Ill.
Watson Coal Mining Co., Knightsville, Ind.
Watson, Little & Co., 208 Opera House Bldg., Chicago, Ill.
Watson & Co., 108 Dearborn st., Chicago, Ill.
Weaver, J. H. & Co., 202 Walnut pl., Phila., Pa.
Weaver, Todd & Co., 217-219 Dearborn st., Chicago, Ill.
Wehner, C. E., 605 Pine st., St. Louis, Mo.
Weinman & Co., 6212 Penn av., Pittsburgh, Pa.

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Wellington, F. W. & Co., 416 Main st., Worcester, Mass.
Wellington, R., 156 1st av., Pittsburgh, Pa.
Wellston Coal and Iron Co., Wellston, O.
West, E. F., Clark, c. 27th st., Chic., Ill.
Western Anthracite Coal Co., 311 Olive st., St. Louis, Mo.
West End Coal and Coke Co. (Ltd.), 129 S. Main st., Pittsburgh, Pa.
Western Fuel and Charcoal Co., 503 Clark st., Chicago, Ill.
West Massilon Coal Co., 3 Euclid av., Cleveland, Ohio.
Westmoreland Coal Co., 91 State st., Boston, Mass.; 224 S. 3d st., Phila., Pa.
Westmoreland County Coal and Coke Co., 146 S. 4th st., Phila., Pa.
West Newton Mines (The). 101 St. Clair st., Cleveland, Ohio.
West Virginia Central & Pittsburgh R. W. Co., 213 German st., Balt., Md.
Wheeler Coal Co., Brazil, Ind.
Wheeler & Howes, E. End Centre Bridge, Bridgeport, Conn.
White Oak Coal Co., Marissa, Ill.
Whitebreast Coal Co., 175 Dearborn st., Chicago, Ill.
Whitebreast Fuel Co., 18 Broadway, N. Y.
Whitmore, J. D., Dayton, O.
Whitmore, W. M. & Co., Dayton, O.
Whitney & Kemmerer, 17 Exchange pl., Boston, Mass.; 137 S. 2d st., Phila., Pa.; 111 B'way, N. Y.
Wible, W. H., Bennett Station, W. P. R. R., Pittsburgh, Pa.
Wigton, R. B. & Sons, 332 Walnut st., Philadelphia, Pa.
Wilkinson, J. H. & Co., Edwards' Station, Ill.
Will, H. C. & Co., High, c. Broad st., Columbus, O.
Williams Coal & Iron Co., 42 Atwater Bank Bldg., Cleveland, O.
Williams, E. J. & Sons, St. David, Ill.
Williams, Frank & Co., 202 Main st., Buffalo, N. Y.
Williams, Taylor, 185 Dearborn st, Chicago, Ill.
Williams, Wells & Co., Union Dep., New Haven, Conn.
Williams & Co., 134 Water st., Pittsb'g, Pa.
Williams & Morris, 333 Walnut st., Phila., Pa.
Williams & Peters, 1 B'way, N. Y.
Willow Bank Coal Co., 36 Mercantile B'k Bldg., Cleveland, O.
Willow Grove Mining Co., 708 Penn av., Pittsb'g, Pa.
Wilmington Coal Assn., Dearborn, c. Monroe st., Chicago, Ill.
Wilmington Star Mining Co., Coal City, Ill.
Wilmington & Springfield Coal Co., Braidwood, Ill.
Wilson, Sheldon & Co., Coalton, O.
Winifrede Coal Co., 307 Walnut st., Phila., Pa.; 113 Monroe st., Chicago. Ill.
Winter, F., Belleville, Ill.
Witch Hazel Mining Co., Youngstown, O.
Witmer Land & Coal Co., 216 S. 3d st., Phila., Pa.
Wolff, T. J., 140 S. 4th st., Phila., Pa.
Wood, H. & Co., 16-18 W. Polk st., Chicago, Ill.
Wood, J. A. Son, 86 Water st., Pittsb'g, Pa.
Wood, J. D. Franklin, c. Bassett, Albany, N. Y.
Wood, James & William, 2-4 Stone st., N. Y.
Woodward, T. & Co., 218 Walnut st., Phila., Pa.
Worcester Coal Co., 1 P. O. Block, Worcester, Mass.
Wyman Coal Co., Galesburg, Ill.
Wyman, W. C. & Co., 158 Dearborn st., Chicago, Ill.
Yates, A. C., 2 Elwood Bldg., Rochester, N. Y.
Yates, J. V. N., 78 Viaduct st., Cleveland, O.
Youghiogheny Coal Co. (Ltd.), 95 5th av., Pittsburgh, Pa.
Youghiogheny Gas Coal Co., 85 State st., Boston, Mass.
Youghiogheny & Ashtabula Coal & Coke Co., 8 Wood st., Pittsburgh, Pa.
Young, O., Coal Co., 101 St. Clair st, Cleveland, O.
Youngstown Ice Co., Youngstown, O.
Zeller & McClellan, Harmony, Ind.

Coal Tar Products.

Balt. Coal Tar & Mfg. Co., 16 W. Camden st., Balt., Md.
Mica Roofing Co., 73 Malden la., N. Y.

Coils.

Field, J. A. & Co., St. Louis, Mo.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
National Pipe Bending Co. (The), 102 River st., New Haven, Conn.

Coke Dealers.

Irvona Coal Co., 216 S. 3d st., Phila., Pa.
Moore, Geo. S., 423 W. Main st., Louisville, Ky.
Robinson & Orr, Hamilton Bldg., Pittsb'gh, Pa. **72.**

Coke, Oven Valves and Supplies.

Bailey, Farrell & Co., Pittsburgh, Pa.

Compasses.

Bemis & Call Hardware & Tool Co., Springfield, Mass.
Black, L. & Co., 142 Woodward av., Detroit, Mich.
Gurley, W. & L. E., Troy, N. Y.
Johnson, Wm., Newark, N. J.
Merrill, R. Sons, 179 Water st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Pool, John M., Easton, Mass.

Concentrators.

Birmingham Pat. Metallurgical Co., 40 B'way, N. Y.
Jennings, D. N., 106 Liberty st., N. Y.

Concrete Mixers.

Caldwell, H. W., 133 W. Washington st., Chicago, Ill.
Cockburn Barrow & Machine Co., 234 11th st., Jersey City, N. J.
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill.
Tomkins, Calvin, 388 South st., N. Y.

Condensers.

Deeley, Robt. & Co., ft. W. 32d st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Fore River Engine Co., Weymouth, Mass.
Gordon & Maxwell Co. (The), Hamilton, O.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Marshall, Wm., University Building, N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Wainwright Mfg. Co. (The), 67 Oliver st., Boston, Mass.; 93 Liberty st., N. Y.
Worthington, Henry R., 86 Liberty st., N. Y. **89.**

Conduits.

Bishop Gutta Percha Co., 420 E. 25th st., N. Y.
Gould, J. H., Phila., Pa.
Iliuribut Flexible Conduit Co., 112 S. Clark st., (Room 10), Chicago, Ill.
National Subway Co., Commerce Bldg., 16 Pacific av. (Room 50), Chicago, Ill.
Valentine, Geo. S., 160 Water st., N. Y.
Underground Electric Conduit & Water Pipe Co., Denver, Col.
Way Foundry Co. (The), 23d and Wood sts., Phila., Pa.

Contractors—Cable Railways.

Andrews, Frank H., 545 W. 33d st., N. Y.
Gould, J. H. & Co., Phila., Pa.
Hains Bros., 55 Broadway, N. Y.

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Hincley, F. E. & Co., 1st Nat. Bank Bldg., Chicago, Ill.
Metallic Street Railway Supply Co., Albany, N. Y.
Miller, D. J., 234 Broadway, N. Y.
National Cable Railway Co., 140 Nassau st., N. Y.
Patent Cable Tramway (Corporation Ltd.), Victoria Mansions, Westminster, S. W. London, England.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. and Washington av., Phila., Pa.
Wright Construction Co., Phœnix Bldg., Chicago, Ill.
Wright, Meysenburg & Co., Phœnix Bldg., Chicago, Ill.
Wright, Meysenburg & Co., St. Louis, Mo.

Contractors—Canal.

Bradbury, W. C., Denver, Col, **14.**

Contractors—Depots and Buildings.

Head & Dowst, Manchester, N. H.
Taylor-Craig Corporation, 201 W. 5th st., St. Paul, Minn.

Contractors—Dock and Piers.

Calumet & Chicago Canal and Dock Co., 170 Dearborn st., Chicago, Ill.
Chicago Dredging & Dock Co., 210 S. Water st., Chicago, Ill.
Cofrode, D. S., 31 Montgomery st., Jersey City, N. J.
Cregin, C. A., 74 E. 125th st., N. Y.
Cronin, R., 138 Luquer st., Brooklyn, N. Y.
Dale, H., ft. W. 42d st., N. Y.
Danforth, Waldo, 129 Broad st., N. Y.
Davis, Irwin & Sanville, Del. av., c. Laurel st., Phila., Pa.
Du Bois' Henry, Sons, 119 South st., N. Y. **19.**
Dupins, A. J., 15 Atwater st., Detroit, Mich.
Fearon & Jenks, 158 South st., N. Y.
Fuller, W. & Sons, 74 Pier st., Albany, N. Y.
Gillies, John, 31 Broadway, N. Y.
Green's Dredging Co., 178 S. Water st., Chicago, Ill.
Hanlon, P., 502 President st., Brooklyn, N. Y.
Hartford Dredging Co. (The), 203 State st., Hartford, Conn.
Henhoeffer & Vaughn, Schackamaxon, c. Beach st., Phila., Pa.
Kelly, Bernard & Son, 187 West st., N. Y.
Kelly, J., 62 Elizabeth st., Brooklyn, N. Y.
Lavender, R. H., 128 Larned st., Detroit, Mich.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii**
Lownsburg, C. & W. H., ft. Poplar st., Phila., Pa.
Michigan Dock Building Co., 276 Atwater st., Detroit, Mich.
Monks, John & Son, 130 Water st., N. Y.
Neveling, I., 407 Walnut st., Phila., Pa.
N. Y. Stone Contracting Co., 113 E. 25th st., N. Y.
Pidgeon Dredging Co., Frank (The), 60 South st., N. Y.
Powell, J. & Son, 426 S. Del av., Phila., Pa.
Roosevelt, Warren, 257 South st., N. Y.
Ross & Sandford, 113 Hudson st., Jersey City, N. J.
Rotan, W. 1310 Beach st., Phila., Pa.
San Francisco Bridge Co., 10 California st., San Francisco, Cal.
Sheldon, J. P., 27 Stuart st., San Francisco, Cal.
Simpson, J. E., 35 B'way, N. Y.
Simpson, J. E., Jr., 35 B'way, N. Y.
Sooysmith & Co., 2 Nassau st., N. Y.
Staats, R. P. & J. H., 35 B'way, N. Y.
Union Dredging Co., 34 Pine st., N. Y.
Van Ness, E. J., 149 Belleville av., Newark, N. J.
Walsh, T. & A., 114 Wall st., N. Y.
White, I. Eugene, 16 Beaver st., N. Y.

Contractors—Dredging.

American Contracting & Dredging Co., 47 Exchange pl., N. Y.
Atlantic Dredging Co., 361 Fulton st., Brooklyn, N. Y.
Brainard Bros., 24 State st., N. Y.
Hartford Dredging Co. (The), 203 State st., Hartford, Conn.
Kingston & Woods, 221 Main st., Buffalo, N. Y.
Monks, John & Son, 130 Water st., N. Y.
Morris & Cummings, 45 Duane st., N. Y.
Ross & Sandford, Fuller Bldg., Jersey City, N. J.
Tebo, Wm. M., 23 South st., N. Y.
Union Dredging Co., 34 Pine st., N. Y.

Contractors—Electric Railways.

Bentley-Knight Electric Railway Co., 115 B'way, N. Y.
Chadbourne & Hastings, Forrest Bldg., Phila., Pa.
Cleveland Electric Motor Co., 1st Nat. B'k Bldg., Cleveland, O.
Daft Electric Light Co. (The), 115 B'way, N. Y.
Dunham, Sumner T., 45 B'way, N. Y.
Hains Bros., 55 B'way, N. Y.
Harris, T. Wm. & Co., 46 B'way, N. Y. **79.**
Henry Electric R'way Co. (The), Kansas City, Mo.
Julien Electric Co., 120 B'way, N. Y.
Metallic Street R'way Supply Co., Albany, N. Y.
Safety Electric Construction Co., 41 Wall st., N. Y.
Skeele, Frank H., 45 B'way, N. Y.
Sprague Electric R'way Motor Co., 16-18 Broad st., N. Y.
U. S. Electric Co., Denver, Col.
Van Depoele, Electric Mfg. Co., 15-21 N. Clinton st., Chicago, Ill.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. & Washington av., Phila., Pa.

Contractors—Elevated Railway Builders.

Cornell, J. B. & J. M., 141 Centre st., N. Y.
Harrington, Edw. & Son, 15th st., c. Penn av., Phila., Pa.
Kimball, C. E., 93 Oliver st., Boston, Mass.
Mack Elevated Railway, 35 Congress st., Boston, Mass.
Maynard & Marsh, 12 Cortlandt st., N. Y.
New Era Mfg. Co., 81 N. Ashland av., Chicago, Ill.
Union Bridge Co. (The), 1 B'way, N. Y.

Contractors—General.

Am. Cable R'way Co., 99 Nassau st., N. Y.
Am. Contracting & Dredging Co., 45 Exchange pl., N. Y.
Am. Development Co., 15 Broad st., N. Y.
Am. Electric Construction Co., 18 Cortlandt st., N. Y.
Am. Insulated Conduit Co., 10 Warren st., N. Y.
Am. Mfg. & Supply Co., Macomb's la., n. W. 152d st., N. Y.
Am. Patent Portable House Mfg. Co., 31 Wall st., N. Y.
Anderson & Barr, 240 11th st., Jersey City, N. J.
Andrews, D. H., 70 Kilby st., Boston, Mass.
Andrews, Wm. D. & Bro., 233 B'way, N. Y.
Arnold, Justin, 48 Dey st., N. Y.
Baird, M. & J., 339 E. 63d st., N. Y.
Bassett, H. L. & Co., 69 Friendship st., Providence, R. I.
Bean, Henry L., 32 Liberty st., N. Y.
Beck, Louis D., 58 Cedar st., N. Y.
Belden & McTighe, 52 B'way, N. Y.
Benedict, Wm. de L., 32 Liberty st., N. Y.
Berthoud, A. P., 111 B'way, N. Y.
Blanchard, Geo. W., 45 B'way, N. Y.
Boller & McGaw, 71 B'way, N. Y.
Booth Bros., 60 Bank st., N. Y.
Bonker's, J. A. Nephew & Co., 110 Wall st., N. Y.
Bradbury, Henry R., 265 B'way, N. Y.
Bradbury & Co., W. C., Denver, Col. **14.**
Bradley, Wm., 538 W. 48th st., N. Y.
Brainard Bros., 2 Bridge st., N. Y.
Bronson & Foster, 52 Broad st., N. Y.
Brooks, Wm., 613 W. 49th st., N. Y.
Brown & Fleming, 129 Broad st., N. Y.
Brown, Howard & Co., 20 Nassau st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Brown, T. B. & Son, 365 South st., N. Y.
Brunton, John & Co., 2810 10th av., N. Y.
Bullock, Samuel R., 11 Wall st., N. Y.
Butcher, E. C. & Co., 96 B'way, N. Y.
Cameron, John, 48 Dey st., N. Y.
Campbell, John & Son, 426 W. 27th st., N. Y.
Canavan, Patrick, 518 W. 56th st., N. Y.
Carr, Benj. J., Sedgwick av., c. Depot pl., N. Y.
Cartter & Co., M. S., 5th and Locust sts., St. Louis, Mo.
Canlfield, Geo., 64 College pl., N. Y.
Chapman, E. R. & Co., 26 Broad st., N. Y.
Chapman, Wm. A. & Co., 65 Westminster st., Providence, R. I.
Checkley, Richard S., 1021 6th av., N. Y.
Ciancimino's Towing & Transportation Co., 115 Broad st., N. Y.
Claffy, John, 48 Dey st., N. Y. **91.**
Clark, Heman, 40 Wall st., N. Y.
Clark, R. U. & Co., 120 B'way, N. Y.
Clay, Geo. W., Pittsburgh, Pa.
Cofrode, D. S., 31 Montgomery st., Jersey City, N. J.
Cofrode & Evans, Pottstown, Pa.
Comegys & Lewis, 15 Cortlandt st., N. Y.
Connell, Michael, 2077 Arthur av., N. Y.
Continental Construction & Improvement Co., 120 B'way, N. Y.
Contracting & Building Co., 15 Broad st., N. Y.
Convis, Chas. E., 102 B'way, N. Y.
Coolidge & Co., W. G., 36 Montauk Block, Chicago, Ill.
Cox, John & Co., 1485 9th av., N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Cregier, Henry P., 36 Pine st., N. Y.
Cregin, Chas. A., 74 E. 125th st., N. Y.
Crimmins, John D., 1043 3d av., N. Y.
Crimmins, Thos. E., 1043 3d av., N. Y.
Cunningham, Michael W., 147th st., n. 10th av., N. Y.
Cunningham, R. A. & Co., 343 E. 16th st., N. Y.
Cuozzo, Donato, 51 E. Houston st., N. Y.
Curran, Patrick F., 48 Dey st., N. Y.
Cutting & Bishop, 167 Foster st., Worcester, Mass.
Danforth, Waldo, 44 B'way, N. Y.
Danforth & Brooks, 19 B'way, N. Y.
Dennen, Owen, W. 165th st., n. 10th av., N. Y.
Doyle, Geo., 18 B'way, N. Y.
Drake & Stratton, 71 B'way, N. Y.
Du Bois', Henry, Sons, 119 South st., N. Y. **19.**
Dunne & Armstrong, Kingsbridge rd., n. Jerome av., N. Y.
Eastman, F. P., ft. E. 40th st., N. Y.
Erdenbrecher, Edw., 586 E. 145th st., N. Y.
Ferguson & Fairchild, 44 B'way, N. Y.
Finn, Michael, 6 W. 118th st., N. Y.
Fiske, P. M. & Co., 263½ E. 42d st., N. Y.
Florida Construction Co., 10 Wall st., N. Y.
Flynt Building & Construction Co., Palmer, Mass.
Frost, M. S. & Son, 71 B'way, N. Y
Fuller, Chas., W. 88th st., n. West End av., N.Y.
Fulton Construction Co., 45 William st., N. Y.
Gallagher, Daniel K., 306 E. 112th st., N. Y.
Gallagher, Joseph, 330 E. 110th st., N. Y.
Gamble, James, 68 Wall st., N. Y.
Garry, Joseph, r. 237 E. 40th st., N. Y.
Gilling, Peter, 3017 3d av., N. Y.
Goodwin, Mark, ft. E. 29th st., N. Y.
Gottlieb, A. & Co., Major Block, Chicago, Ill.
Gray, James H., Park av., n. E. 100th st., N. Y.
Guidet, Charles, 237 Broadway, N. Y.
Haines, Chas. D., 45 Broadway, N. Y.
Hamilton, T. H., Toledo, O.
Harlow, James H. & Co., 411 Wood st., Pittsburgh, Pa.
Harris, Geo. F., 17 Broadway, N. Y.
Harris, Theodore S., 1 Broadway, N. Y.
Harris, T. Wm. & Co., 46 B'way, N. Y. **79.**
Hartford Dredging Co., 203 State st., Hartford, Conn.
Hawkins, R. F., Iron Works, 200 Liberty st., Springfield, Mass.
Hawthorn & Co., 12 Cortlandt st., N. Y.
Hayes, John T., 145 Broadway, N. Y.
Hayes, Timothy & Co., 160 Broadway, N. Y.
Haywood & Duffy, 134 E. 20th st., N. Y.
Head & Dowst, Manchester, N. H.
Hinman, John N., 171 Broadway, N. Y.
Holmes Bros., 137 and 320 Broadway, N. Y.
Hopkins Bridge Construction Co., St. Louis, Mo.
Hough, Chas. V., 7th av., c. W. 151st st., N. Y.
Howell, Alexander J., 336 W. 19th st., N. Y.
Hudson River Supply Co., 16 Exchange pl., N. Y.
Hutchinson, Andrew J., 120 Broadway, N. Y.
Inness, Thos. B. & Co., 115 Broadway, N. Y.
International Construction R'way & Investors' Co., 40 Wall st., N. Y.
Inter-Ocean Improvement Co., 38 Park Row, N. Y.
Irvine & Co., 280 Broadway, N. Y.
Johnson, L. W. & Co., 511 W. 57th st., N. Y.
Keeney, Edwin F., 11 King st., N. Y.
Kehoe, John, 520 E. 18th st., N. Y.
Kelcher, John, 14 Vesey st., N. Y.
Kelly, Wm. 609 W. 47th st., N. Y.
King, John S., 145 Broadway, N. Y.
Klein, Louis, 315 E. 54th st., N. Y.
Knott, Kennard, 234 S. Jefferson st., Chic., Ill.
La Bounty, M. J., 464 Division st., Chicago, Ill.
Land & River Improvement Co., 120 B'way, N.Y.
Larkin, M. & Son, 519 E. 16th st., N. Y.
Larney, Patrick, 325 E. 38th st., N. Y.
Lean & Blair, Penn Bldg., Pittsburgh, Pa.
Learned, A. C. J., 7 Charles st., Providence, R. I.
Lennon, John J., Orchard st., n. Bremen av., N. Y.
Lennon, M. & Son, Jerome av., n. E. 167th st., N. Y.
Leonard, Charles W., 122d st., n. 10th av., N. Y.
Leonard & Elliott, 2 Wall st., N. Y.
Levey, Charles L., 49 B'way, N. Y.
Lighthall, Almerin H., 102 B'way, N. Y.
Lockwood, John C., 52 B'way, N. Y.
Lovatt, Edw. T., 40 Wall st., N. Y.
Lynch, Edw., 307 E. 114th st., N. Y.
McClellan, W. C., U. S. Hotel, Boston, Mass.
McClure & Schuler, Bissell Block, Pittsb'gh, Pa.
McCracken, W. V. & Co., 40 Wall st., N. Y.
McDonald & Penfield, Fremont, Neb.
McKenna, Ryan & Son, 1039 Liberty st, Pittsburgh, Pa.
McManus, Chas. Sons, 21 Park Row, N. Y.
McQuade, John, 1589 3d av., N. Y.
Machen, Edw. C., 45 B'way, N. Y.
Maloney, Michael, 512 E. 118th st., N. Y.
Maloney, Thos., 512 E. 118th st., N. Y.
Mass. & Southern Construction Co., 45 B'way, N. Y.
Mercer, Wm. S. & Co., 6 Wall st., N. Y.
Mexican American Construction Co., 32 Nassau st., N. Y.
Mexican National Construction Co., 32 Nassau st., N. Y.
Millener, J. H., 215 Main st., Buffalo, N. Y.
Moffett, Hodgkins & Clarke, Watertown, N. Y.; 34½ Pine st., N. Y.
Monks, John & Son, 130 Water st., N. Y.
Mooney, John H., 40 Wall st., N. Y.
Moran & Low, E. 138th st., n. 3d av., N. Y.
Morton & Chesley, 18 B'way, N. Y.
Mullins, Robt. F., 10 Wall st., N. Y.
Mulry, James B., 23 Rutgers st., N. Y.
Mulry, Lawrence V., 309 E. 11th st., N. Y.
Mulry, Thos. & Son, 367 W. 12th st., N. Y.
Murdock, Harvey, 140 Nassau st., N. Y.
Nash & Doran, 235 William st., N. Y.
National Conduit Mfg. Co., 16 Cortlandt st., N. Y.
N. J. Construction Co., 15 Broad st., N. Y.
Newman, Jas. J., 19 Wilson st., Providence, R. I.
N. Y. Cable R'way Construction Co., 170 B'way, N. Y.
N. Y. Contract Co., 206 B'way, N. Y.
N. Y. Underground R'way Construction Co., 120 B'way, N. Y.
Nicaragua Canal Construction Co., 36 Wall st., N. Y.
Noll, Augustus & Co., 15 E. 16th st., N. Y.
Norcross Brothers, Worcester, Mass.
Norman & O'Brien, 23 South st., N. Y.
O'Brien Bros., 49 South st., N. Y.
O'Brien & Clark, 40 Wall st., N. Y.
O'Kelly, P. J., 263½ E. 42d st., N. Y.
Onderdonk, Andrew, 35 Wall st., N. Y.

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Pacific Construction Co., 45 William st., N.Y.
Parker, John H., 342 W. 18th st., N. Y.
Passaic Rolling Mill Co., Paterson, N. J.; 45 B'way, N. Y.
Peterson, Chas. & Co., 247 W. 125th st., N. Y.
Phelan, James, Boulevard, n. W. 83d st., N. Y.
Phœnix Construction Co , 18 Cortlandt st., N. Y.
Pickman, Frederick D., 145 B'way, N. Y.
Frank Pidgeon Dredging Co., 60 South st., N. Y.
Pierce Artesian & Oil Well Supply Co , 80 Beaver st , N. Y.
Piercy, H. Z. & Z. T., 207-227 Thompson st., N.Y.
Poetsch-Sooysmith Freezing Co., 2 Nassau st., N. Y.
Powers, John J., 17 Rector st., N. Y.
Puerto Cabello Contracting Co., 1 B'way, N. Y.
Purdy, John, 321 W. 26th st., N. Y.
Raymond, James, 64 B'way, N. Y.
Reed, Robert A., 17 B'way, N. Y.
Reilly, Hugh J., 31 Broadway, N. Y.
Rennie, Arthur H., 235 Pearl st., N. Y.
Rexford & Towers, 135 Pearl st., N. Y.
Reynolds, Patrick, 309 E. 80th st., N. Y.
Riley R'way Construction Co., 196 Greenwich st., N. Y.
Roberts, Walter J., 35 Liberty st., N. Y.
Rodgers & Farrell, 2810 10th av., N. Y.
Rogers, Geo. W., 44 Broadway, N. Y.
Ross & Sandford, 118 Hudson st., Jersey City, N. J.
Rutherford, John W., 145 Broadway, N. Y.
Salter, John T., 44 Broadway, N. Y.
Seashore Construction Co., 13 Park Row, N. Y.
Seattle & Eastern Construction Co., 35 William st., N. Y.
Secor, James F., 156 Broadway, N. Y.
Simmons, James A., 45 Broadway, N. Y.
Simpson, J. E. & Co., 35 Broadway, N. Y.
Slattery, James, 216 W. 57th st., N. Y.
Slattery, John, 872 Park av., N. Y.
Smith, Clarence L., 18 Broadway, N. Y.
Smith, Francis H., 16 Exchange pl., N. Y.
Smith, Richard, 96 Broadway, N. Y.
Smith, P. Minturn, 45 Broadway, N. Y.
Smith & Ripley, 61 Broadway, N. Y.
Sniffen, Chas. A., 55 E. 41st st., N. Y.
Sooysmith & Co., 2 Nassau st., N. Y.
Spratt, James K., 293 Broadway, N. Y.
Stanton, Daniel N., 52 Broadway, N. Y.
Sweet & Young, 95 Liberty st., N. Y.
Symington, James, 16 Exchange pl., N. Y.
Thileman, F., Jr., & Co, 119 E. 122d st., N. Y.
Tierney, Myles, 160 Broadway. N. Y.
Townsend, Henry E., 28 West st , N. Y.
Trumbull & Cheney, 209 Washington st., Boston, Mass.
Underground R'way Construction Co., 120 Broadway, N. Y.
U. S. R'way Improvement Co., 11 Wall st., N. Y.
Vetter, Michael, 575 E. 150th st., N. Y.
Waite, Van Harlingen & Mactier, 308 Walnut st., Phila., Pa.
Walker, Joseph, 242 E. 113th st., N. Y.
Walworth Construction Co., 134 Congress st., Boston, Mass.
Warden, Henry, Germantown Junc., Phila., Pa.
Welles, Henry S., 229 B'way, N. Y.
Wentworth, Elias. 44 B'way, N. Y.
Westbrook, John B., 40 Wall st., N. Y.
Wharton, Wm., Jr., & Co., 25th st. & Wash'n av., Phila., Pa.
Whyte, Wm. C., 15 Cortlandt st., N. Y.
Wiggs & Bacon, Birmingham, Ala.
Wilkie, Mortimer, 71 B'way, N. Y.
Williams, Samuel T., 97 William st., N.Y.
Williams & Potter, 2 W. 14th st., N. Y.
Woods, Owen, 615 W. 37th st., N. Y.
Yates, Jos. J., 850 8th av., N. Y.
Young, John, 689 E. 159th st., N.Y.
Young, S. & Co., 17 B'way, N. Y.

Contractors—Labor.

Caporale, S., 170 Mulberry st., N. Y.
De Intinis, L., 12th st. & Chouteau av., St. Louis, Mo.
Italian Society of Emigration (Ltd.), 24 State st., N. Y.

Contractors—Marine, Piers, Etc.

Phœnixville Bridge Works, 410 Walnut st., Phila., Pa.; 49 William st., N. Y.
Union Bridge Co. (The), 1 B'way, N. Y.

Contractors—Oil, Gas and Artesian Wells.

American Well Drilling Co., 118 E. Main st., Louisville, Ky. **23.**
Enterprise Drilling Co., 55 21st st., Pittsb'g, Pa.
Forest City Petroleum, Gas & Drilling Co., 272 Pearl st., Cleveland, O.
Harris, T. William & Co., 46 B'way, N. Y. **79.**
White, Wm. H., 32 Pine st., N. Y.

Contractors—Railroad.

Abbott, J.E., 725 Grove st., San Francisco, Cal.
Abrams, F. H., Worthington, Ind.
Ackroyd, James, Albany, N. Y.
Adams, J. E., Cool Well, Amherst Co., Va.
Adam, Miller & Co., Rome, N. Y.
Adams & Rogers, Detroit, Mich.
Agnew, E. W. & Co., Ocala, Fla.
Aiken & Gordon, Columbia, Tenn.
Allen & Grindele, 132 Van Buren st., Chicago, Ill.
Allen & Nelson, Seattle, W. T.
Alexander, D. P., Wichita, Kan.
Allison & Co., Gardner, Ill.
Anderson & Barr, Tribune Bldg., N. Y.
Anderson & Barr, 240 11th st., Jersey City, N. J.
Andrews, J. S., Memphis, Tenn.
Angier, Chas., Hancock, Mich.
Appleyard, J., Lansing, Mich.
Armie, Jackson, Joplin, Mo.
Armington, R. D., Providence, R. I.
Armstrong, Chas. N., Montreal, Can.
Armstrong, J. D., Campbellton, N. B.
Arnold, Geo. & Co., Memphis, Tenn.
Atlantic & Pacific Steam Grading & R'way Const. Co., St. Joseph, Mo.
Ayres, Abraham, 506 W. 45th st., N. Y.
Bacon, Wm., Castorville, Mo.
Bagnall, Robt., Baden, Mo.
Bagley, Jno., Opechee, Mich.
Baker, F. O. & Son, Fort Scott, Kan.
Baldwin, Chas., Starkville, Miss.
Baldwin, J. W., San Francisco, Cal.
Ballantine & Rogers, New Orleans, La.
Banbury, Thos., Pasadena, Cal.
Barker, D. L., 27 Weybosset st., Providence, R. I.
Barr, W., 136 Water st., Pittsburgh, Pa.
Barry, T., 114 East Main st., Richmond, Va.
Bartlett, W., Little Rock, Ark.
Bartram & Squires, Sharon, Conn.
Bates, C. J., Major Block, Chicago, Ill.
Bates, W. S., Major Block, Chicago, Ill.
Baumgras, Julius & Co., Syracuse, N. Y.
Baylor, E. J. C. & Co., Cedar Rapids, Ia.
Bean, H. F., Jackson, Mich.
Beckwith & Quackenbush, Washington, D. C.
Bell, H. P., Winnipeg, Can.
Bell, J. L. W., 822 Market st., Emporia, Kas.
Bell, W. W., Jamestown, Dak.
Bennett, Patrick, Fairmount, W. Va.
Bennett, Nelson, Tacoma, Wash'n Ter.
Berrick, Chas., Buffalo, N. Y.
Best, Peter B., Stockton, N. J.
Bethune, Craney Bros & Co., St. Joseph, Mo.
Bisan, Charles, Albany, N. Y.
Bishop, J. W., St. Paul, Minn.
Black & Opt, Columbia, Pa.
Blake Bros., 348 Hudson st., N. Y.
Blosh, V. R., Topeka, Kan.
Bolles, J. N., 108 E. Monument st., Balt., Md.
Bond, E. W., Willoughby, O.
Bondurant & Jopling, Augusta, Ga.
Bootar, J. G., 14 Howard st., San Francisco, Cal.
Booth & Cosgrove, Prescott, Ont.
Booth & Flynn, Pittsburgh, Pa.
Boston Artesian Well Co., Boston, Mass.
Bothwell, S., Tyler, Tex.
Botsford, A. H., 145 Washington st., St. Louis, Mo.
Bouscaren, G., 35 W. 4th st., Cincinnati, O.

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Bouton, Chas. A., 465 W. 83d st., N. Y.
Boyd, Jas. A., Boyd's Station, Md.
Bracken, Andrew, West Haven, Conn.
Bradbury & Co., W. C., Denver, Col. **14.**
Brainerd, E., 20 Coenties Slip, N. Y.
Breen & Connelly, St. Catherines, Ont.
Brennan, P., Owatonna, Minn.
Brennan, Thos., Owatonna, Minn.
Broadhead & Hickey, Scranton, Pa.
Brown, G. P., Bowling Green, Mo.
Brown, Howard & Co., 164 Dearborn st. (Room 208), Chicago, Ill.; 20 Nassau st., N. Y.
Brown, J. C., St. Johns, N. B.
Brown, J. J., Council Bluffs, Iowa.
Brown, J. W., 23 Weybosset st., Providence, R. I.
Brown, Maxwell & Co., St. Stephens, N. B.
Brown, O. D., Sioux City, Ia.
Brownell, R. E. & Co., 517 Royal Insurance Bldg. Chicago, Ill.
Briggs, John, Buffalo, N. Y.
Brinknell, P. F., Binghamton, N. Y.
Bruce, Barron & Co., Marseilles, Ill.
Bruggeman, H., 425 Bush st, San Francisco, Cal.
Buckley, L. L., Hannibal, Mo.
Buckman, A. E., 314 Montgomery st., San Francisco, Cal.
Bullock, Geo., Phila., Pa.
Bullock, Samuel R. & Co., 11 Wall st., N. Y.
Burk, W. F. 31 Milk st., Boston, Mass.
Burkett & Murphy, Palestine, Tex.
Burkhalter, J. H., Augusta, Ga.
Burkett, G. W., Palestine, Tex.
Burlew, C. N., Washington, D. C.
Burnes, Thos., Dubuque, Ia.
Burns & Co., Rich Hill, Mo.
Burnham, S. H., Birmingham, Ala.,
Burr, J. D., Topeka, Kan.
Burtchall, W. D., Norcross, Ga.
Burtchall, W. D. & Co., Atlanta, Ga.
Bush, Levi L., Bird-in-Hand, Pa.
Bush & Keller, Lancaster, Pa.
Bussell, Chas. E., 312 S. Barstow st., Eau Clair, Wis.
Butler, J. H., 120 Pine st., Providence, R. I.
Butler, T. A. & Son, Lyons, Kas.
Caldwell, Robert, St. Johnsbury, Vt.
Call & Funck, Lebanon, Pa.
Caldwell & Varnum, St. Johnsbury, Vt.
Campbell, Cornellus, Altoona, Pa.
Campbell, R. B., Turner's Falls, Mass.
Campbell, Thos., Altoona, Pa.
Candee, Daniel, Syracuse, N. Y.
Canton Bridge Co., Canton, O.
Carey, Dominick M., Canton, O.
Carlisle, J. N., Pueblo, Col.
Carroll, C. M., Plum Branch, S. C.
Carroll, D. W. C. & Co., Pittsburgh, Pa.
Carroll, Jas., Kankakee, Ill.
Carroll, Patrick, Cumberland, Md.
Cartter, M. S. & Co., Broadway and Locust st., St. Louis, Mo.
Carter, N. L., Belle Plaine, Kan.
Casement, J. S. Painesville, O.
Casey, Jas. D., Rochester, N. Y.
Cassin, Isaac S., 1404 N. 12th st., Phila., Pa.
Cavanaugh & Crowe, Louisville, Ky.
Chamberlain, Jas., Shoup, Mich.
Chapman, W. J., San Francisco, Cal.
Chapman, Wm. P., Canton, O.
Church & Swain, 73 Water st., Pittsburgh, Pa.
Clarke, Lipe & Co., Denver, Col.
Clark, Heman, & Co., N. Y.
Clay, Geo. W., Pittsburgh, Pa.
Clemons & Sons, Point Marblehead, O.
Cleveland, M. A., Watertown, N. Y.
Cobb, Robt., Tionesta, Pa.
Cochran, S., Columbus, O.
Codwise, B. R., Rockville, Md.
Coffey, M., St. Louis, Mo.
Cofrode, D. S., 31 Montgomery st., Jersey City, N. J.
Cofrode & Evans, Pottstown, Pa.
Coleman & Rice, Laurens C. H., S. C.
Collins, P. & T., 8th and Chestnut sts., Philadelphia, Pa.
Collins & Larkworthy, Carlinville, Ill.
Colt, J. B., Clinton, Mo.
Coniegys & Lewis, 15 Cortlandt st., N. Y.
Condons Bros., Knoxville, Tenn.
Conkey, Horace, Evansville, Ind.
Connell, Thos., Youngstown, O.
Conrad & Miller, 576 Kearney st., San Francisco, Cal.
Conway, M. W., 487 Monroe st., Brooklyn, N. Y.
Cook, E. H. & Co., Rochester, N. Y.
Cook & Grant, Columbus, O.
Cooks, W., St. Paul, Minn.
Coolidge & Co., W. G., 36 Montauk Block, Chicago, Ill.
Coolman, E. B., New Albany, Ind.
Cooney, Eckstein & Co., 168 Pearl st., N. Y.
Cooney, J. J. & Co., Memphis, Tenn.
Cooper, Theo., 35 B'way, N. Y.
Cooper, H. J., St. Paul, Minn.
Corbett, Jas., Ottawa, Ont., Can.
Corey Bros., Ogden, Utah.
Corrigan, Mathew, Cumberland, Md.
Costigan, Thos., 3115 Sp. Garden st., Phila., Pa.
Cottingham, J. J., Indianapolis, Ind.
Courtney, John, Duncan, Arizona Terr.
Coverdale, R. F., 15 E. 3d st., Cincinnati, O.
Cox, J., Montgomery st., San Francisco, Cal.
Coyne Joseph, Jeffersonville, Ind.
Cragie, Rafferty & Youmans, Buffalo, N. Y.
Craig, W. B. & Co., Mankato, Minn.
Craig, W. P., 95 Liberty st., N. Y.
Craney, Clark & Win, Dallas City, Ill.
Craven, Timothy, 38 I st., Washington, D. C.
Crawford, J. P., 16 Court st., B'klyn, N. Y.
Cribbett, James, Ocala, Fla.
Crimmins, John D., 3d av. & 60th st., N. Y.
Cross, R., 627 Sacramento st., San Francisco, Cal.
Crouch, W. J., Charleston, S. C.
Crowley, Fred C., Borden Block, Chicago, Ill.
Cummings, M., Huntingburgh, Ind.
Curtis, John E., 810 Classon av., B'klyn, N. Y.
Curtis & Diver, Keokuk, Ia.
Cutter, S. C., Minneapolis, Minn.
Dacey, J. B. & Co., Boston, Mass.
Dallin, Wm., 166 E. Washington st. (Room 11), Chicago, Ill
Danby & Richards, Superior, Wis.
Danaby, Daniel, Aurora, Ill.
Daniels, J. J., Rockville, Ind.
Darwin, W. E. & Co., 69 Dearborn st. (Room 21), Chicago, Ill.
Davin, H., Lexington, Va.
Davis, A. & Co., Dallas, Texas.
Davis, B., 400 Franklin st., Richmond, Va.
Davis, J. R., Atlanta, Ga.
Dawe, J. H., Somerville, Mass.
Day, F. H., 136 Main st., San Francisco, Cal.
Dedrick, Thos., New Burlington, O.
De Greaver, H., 314 Montgomery st., San Francisco, Cal.
De Loach, W. H., Excelsior, Ga.
Demens, McLain & Cotter, Longwood, Orange Co., Fla.
Denithorne, R., Phœnixville, Pa.
Denning, Geo. A., Augusta, Ga.
Desparlos, N., Sioux City, Ia.
Detwiller Bros., El Paso, Texas.
Deville, Horace, 193 Lincoln av., Chicago, Ill.
Dexterville Construction Co., Dexterville, Wis.
Dickinson, P. P., 7 Nassau st., N. Y.
Diggins Bros., 528 California st., San Francisco, Cal.
Dill, M. T., Portsmouth, Va.
Diller, L. Y., East Berlin, Pa.
Dingman & Serrickisen, Tionesta, Pa.
Dishman, C. H., Henderson, Ky.
Dobson, P. S., 20 Clifford st., Providence, R. I.
Dolan, Joseph, Pottsville, Pa.
Dolan & Sweeney, Lexington, Ky.
Donelly, John, Memphis, Tenn.
Donnelly, E., 408 Jones st., San Francisco, Cal.
Douglas, F. B., Dayton, O.
Douglass, W. A. & Co., Leadville, Col.
Dowling & Kennedy, Binghamton, N. Y.
Dows, S. L., Cedar Rapids, Ia.
Drake & Stratton, 71 B'way, N. Y.
Duffin, T. & Bro., Memphis, Tenn.
Duffy, C. W. 501 California st., San Francisco, Cal.

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Dull, J. & J., Harrisburg, Pa.
Dunavant, W. P., Memphis, Tenn.
Dunavant & Kelly, Memphis, Tenn.
Dunbar, C. F., Ft. Colborne, Can.
Duncan, J. A., Las Vegas, N. M.
Duncan, Robert, Keokuk, Ia.
Duncan Bros., Killbuck, O.
Dunham, Sumner T., 45 Broadway, N. Y.
Dunlap, J. C., Monroe, Wis.
Dyer, J. S., 320 California st., San Francisco, Cal.
Dyer, John T., Norristown, Pa.
Eager, George R., Marietta, Ga.
East Berlin Iron Construction Co., East Berlin, Conn.
Eaton, S. S., Logansport, Ind.
Eaton & Daily, Burlington, Ia.
Eaton, S. Dwight & Co., Burlington, Ia.
Edward, C. H., 35 Hawley st., Boston, Mass.
Edwards, J. N., Sturgis, Miss.
Eidlitz & Son, 308 E. 59th st., N. Y.
Elder, J. R., New Orleans, La.
Ellis, B. F., San Francisco, Cal.
Ellis, W. T., Griffin, Ga.
Ellison & Boutwell, Macon, Ga.
Elmer, H. N., St. Paul, Minn.
Ellsworth, F. M. & Co., Rochester, N. Y.
Emory, Simon, Hancock, Mich.
Englis, E. E., Toronto, Can.
Enterprise Construction Co., Ft. Scott, Kan.
Esson, John, Toronto, Ont.
Evans, G. M., Roanoke, Va.
Evans, H. R., 99 Dorrance st., Providence, R. I.
Evans, Richard J., Longview, Texas.
Evans & Ackerman, Binghamton, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Fairchild, J. J., Switz City, Ind.
Fairfax, Henry, Pulaski, Va.
Fanning & Swan, 19 Chapel st., Providence, R. I.
Farr & Vincent, Grand Rapids, Mich.
Farren, B. N., 1731 Spring Garden st., Phila., Pa.
Favorite, Archibald, Hanover, Pa.
Feetham & Porter, Helena, Mont.
Ferguson & Co., San Francisco, Cal.; Macon, Ga.
Ferris & Halliday, 98 Hudson st., Jersey City, N. J.
Finley, D., 10 California st., San Francisco, Cal.
Fisher, H., 638 Market st., San Francisco, Cal.
Fitzgerald & Mallory Construction Co., Charlton, Ia.
Fitzgerald, John, Lincoln, Neb.
Fitzsimons & Connell, 8 N. Clark st. (Room 2), Chicago, Ill.
Fitzsimmons, C., 100 Washington st., Chicago, Ill.
Fitzsimmons & Connell, 146 S. Water st., Chicago, Ill.
Fletcher, C. K., Bartow, Fla.
Fletcher, John F., Nashville, Tenn.
Flynn, John, Jr., Des Moines, Ia.
Flynn, Joseph, Memphis, Tenn.
Flynn, P., Independence, Ia
Flynt Building & Construction Co., Palmer, Mass.
Ford, T., Keokuk, Ia.
Fosbrook, L. & G. J., Sorel, Can.
Foster & Creighton, Nashville, Tenn.
Foye, J. N. & Son, Dubuque, Ia.
Foley, James, Warren Springs., Ga.
Frasier & Donaldson, Washington, Ind.
Frechette, Oliver, Sorel, Que.
Freeland & Mackin, Pittsb'g, Pa.
Freeman, Arch'd, 624 N. 35th st., Phila., Pa.
Freeze, A. C., 3 Mission st., San Francisco, Cal.
French, W. F., 288 Eddy st., Providence, R. I.
Freret, W. A., 37 Carondelet st., New Orleans, La.
Friday, Jacob, Pittsb'g, Pa.
Frost, Stearns & Hooker, Columbus, O.
Fruen & Co., 805 Pine st., St. Louis, Mo.
Fudge & Kearn, Memphis, Tenn.
Furlong, J. W. & Co., 73 Benevolen st., Providence, R. I.
Gallagher, Thos., Rondout, N. Y.
Gardner, Simeon B., Wickford, R. I.
Garretson, Theo., Pottsville, Pa.
Garvey & Lee, Memphis, Tenn.
Garvey Bros., 7 Harris av., Providence, R. I.
Gatchel, Chas. A., Buffalo, N. Y.
Gaynor, E. J., Pottsville, Pa.
Georgia Const. & Imp. Co., Augusta, Ga.
Gerten, N., Chicago, Ill.
Gervais, A. E., Contrecœur Point, Can.
Gibbins, Austin, 312 W. 40th st., N. Y.
Gibson, O. A., West Point, Miss.
Gibson, Wm., Beamsville, Ont.
Gibson & Co., West Point, Miss.
Gill, J. A., 33 Hawley st., Boston, Mass.
Gillespie, Wm., Morris Mills, Charlotte Co., N. B.
Gillies, John (Room 71), Astor House, N. Y.
Gold, L. O., Delaplane, Va.
Goldsmith, Oliver C., La Fayette, Ind.
Gonder, J. D. & Bro., Strasburgh, Pa.
Goodell & Waters, Phila., Pa.
Goodwin, John, Balt., Md.
Gottlieb & Co., A., Major Block, Chicago, Ill.
Gordon, Clark, Sherbrooke, Que.
Gordon, G. H., Sherbrooke, Que.
Gordon, John T., Pittsburgh, Pa.
Gorten, D., 23 Eddy st., Providence, R. I.
Gould, G. T., Athens, O.
Graham, John, 1432 Avenue A, N. Y.
Graham, J. Kearney, Indianapolis, Ind.
Grant, A. A., Albuquerque, N. M.
Grant, Donald, Faribault, Minn.
Grant, John, West Chester, Pa.
Grant & Ross, Winnipeg, Man.
Graves, J., 611 Missouri st., San Francisco, Cal.
Gray, C. E., St. Louis, Mo.
Gray, W. H., 56 Illinois st., Chicago, Ill.
Green, Jos. Green, Bangor, Me.
Green, O. B., 178 S. Water st., Chicago, Ill.
Green, W. L., Carbondale, Kan.
Green, W. F., & Son, 274 Border st., Boston, Mass.
Greene, W. H. & Co., Helena, Mont.
Green & Gordon, 239 Federal st., Portland, Me.
Greenough, J. H., Robella, Pa.
Grigsby & Bro., Jefferson, Tex.
Grimsley Geo., Waverly, O.
Gruelle, N. R. & Co., Ocala, Fla.
Guggarty, L., Chillicothe, Ia.
Guggerty & Hart, Ottumwa, Ia.
Gwirmer, Fred, Allegheny City, Pa.
Haaf, J., 516 Kearney st., San Francisco, Cal.
Hagan, J., 432 Kearney st., San Francisco, Cal.
Haines, A. G., Glen Falls, N. Y.
Haines, Chas. L., Kinderhook, N. Y.
Haines, D. S., Glens Falls, N. Y.
Haines, F. E., Glens Falls, N. Y.
Hains Bros., 55 B'way, N. Y.
Haley, S. M. B., 2207 Fillmore st., San Francisco, Cal.
Hall, Smith, Burns & Co., Portland, Ore,
Halleck Bros., Rootstown, O.
Haller, M., Benton and Spruce sts., Allegheny City, Pa.
Hallett, J. L., Dilley, Ore.
Halstead, E. M., Keithsburg, Ill.
Hamilton, T. H., Toledo, O.
Hammond, S. A., 305 Westminster st., Providence, R. I.
Hampson, Jos. H., El Paso, Tex.
Hannon, Hurst & Co., Montgomery, Ala.
Hancock, C., 620 Shotwell st., San Francisco, Cal.
Harbin, Thos., Puxico, Mo.
Hardenberg, A. J., 120 B'way, N. Y.
Harding, B. L., Des Moines, Ia.
Harlow, James H. & Co., 411 Wood st., Pittsb'g, Pa.
Harper, C. P., Arcola, Ga.
Harris, D., 916 Geary st., San Francisco, Cal.
Harris, Geo. D., Alexandria, Ala.
Harris, Gordis, D., Keene, N. H.
Harris, J., 35 Hawley st., Boston, Mass.
Harris, Wm. T., 19 Exchange pl., Boston, Mass.
Harris, T. William & Co., 46 B'way, N. Y. 79.
Harrison, S. A., Milwaukee, Wis.
Harrison & Green, Milwaukee, Wis.
Harry, Wm., Middleport, O.
Hart, Chas. & Son, 356 Tenth st., B'klyn, N. Y.
Hart, John, Ottumwa, Ia.
Hartnell, J. C., Memphis, Tenn.
Harvey, L. S., 1013 Market st., San Francisco, Cal.
Haslett & Van Horne, 15 Cortlandt st., N. Y.

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Hege, Enos, Indianapolis. Ind.
Hemberle & Co., 76 Mayor Block, Chicago, Ill.
Hendricks, J. S., Richmond, Utah
Hendrie, Seymmes & Co., Hamilton, Ont.
Hendrie, James, Hamilton, Ont.
Hendrie, Wm., Hamilton, Ont.
Henry & Balch, Minneapolis, Minn.
Heustis, Fred. L., Crawfordville, Ind.
Hewitt, W. M., Muscatine, Ia.
Heyn, Alfred, 47 B'way, N. Y.
Hickerson, L. D. & Son, Tullahoma, Tenn.
Hicks, Holmes & Co., Indianapolis, Ind.
Higgens & Morris, Grand Rapids, Mich.
Higgins, A. G., Spring Grove, Va.
Hill, John W., 5th av. and Race sts., Cincinnati, Ohio.
Hilliard, T. J. & Co., Kansas City, Mo.
Hilton, A., 826 Buchanan st., St. Louis, Mo.
Hilton Bridge Construction Co., Albany, N. Y.
Hinckley, F. E., 164 Dearborn st. (Room 606), Chicago, Ill.
Hinds, Moffett, Watertown, N. Y.
Hireene, Timothy, Waverly, N. Y.
Hoadley, J. C., Boston, Mass.
Hoar, R. M., Houghton, Mich.
Hoar & Seldon, Houghton, Mich.
Hock, T., 516 Kearney st., San Francisco, Cal.
Hoffman, H. J., Ackermanville, Pa.
Hogan, M. J., St. John, N. B.
Hoge, Chas., Frankfort, Ky.
Hoge & Son, Hannibal, Mo
Holbrook & Bro., Balt., Md.
Holcom & Cook, Ravenna. O.
Holleran & Ingerman, Noblesville, Ind.
Hollis, A. E., Wickford, R. I.
Holman, D. F., 94 Dearborn st., Chicago, Ill.
Holmes, Davis & Co., Nashville, Tenn.
Holmes, Walton B., Kansas City, Mo.
Holt, H S., Winnipeg, Man.
Hopkins Bridge Construction Co., St. Louis, Mo.
Hopkins, H. S. & Co., St. Louis, Mo.
Horton, N. B., 33 Weybosset st., Providence, R. I.
Houlihan & Madigan, Cohoes, N. Y.
Houser, E. L. & C. J., St. Louis, Mo.
Howley & Moran, Pittsburgh, Pa.
Hoxey, T F., Paterson, N. J.
Hughes, J. P., Fort Worth, Tex.
Hugell, J., Akron, O.
Hull, C. P., 73 Weybosset st., Providence, R. I.
Humbird, James S., Harrisburg, Pa.
Humbird, John, Jr., Cumberland, Md.
Humbird, J., Sr., Cumberland, Md.
Humbird, J. Wilson, Cumberland Md.
Humbird, Jacob & Co., Cumberland, Md,
Hunter John, Stirling Valley, Cayuga Co., N. Y.
Hutchinson, A. J., 120 B'way, N. Y.
Hutchinson & Doheny, Fairmont, W. Va.
Hutton, J. T., Morganfield, Ky.
Hutton, W. R., 35 B'way, New York.
Huzelgren & Co., Freeport, Ill.
Inman Bros., 32 Liberty st., N. Y.
Innes, Thomas B. & Co., 115 B'way, N. Y.
Inter-Ocean Improvement Co. (The). 4 Sherman st. (Room 54 to 59), Chicago, Ill.
Jackson, J., Cedar Rapids, Ia.
Jackson, J. F. B., Blount Sp'gs, Ala.
Jackson, L. O., Bainbridge, Ga.
Jameson, John, Bloomsburg, Pa.
Jenkins, J. B., Fort Scott Kansas.
Jenkins & Yerkle, Memphis, Tenn.
Jenkins & Yerkle, Fort Scott, Kan.
Jessup, James, Lumberton, O.
Jipson, W. C., Blissford, Mich.
Johnson, J. B., St. Louis, Mo.
Johnson, Fdy. & Mach. Co., E. 118 st., Harlem River, N. Y.
Johnson & Hanson, San Antonio, Tex.
Jolly, A. J. & Sons (Ltd.), Phillipsburg, Pa.
Jones & Benner, 218 S. 4th st., Phila., Pa.
Jones, T. Barton, Balt., Md.
Jones & Carey, Fort Worth, Tex.
Jones, Drake & Co., 20 Grant st., Pittsb'g, Pa.
Jones, F. W., Mt. Vernon, O.
Jones, Jno. R., Shreveport, La.
Jones, Morgan, Fort Worth, Tex.
Joss, S. H., 76 Cross st., Portland, Me.
Joyce, Martin, Pittsb'g, Pa.
Kavanaugh, Thos., Dubuque, Ia.
Kearney, L., 1080 Howard st., San Francisco, Cal.
Keating & Co., Pittsburgh, Pa.
Keefer & Fisher, 54 Sheldley Bldg., Kansas City, Mo.
Keefer, Henry, Huntington, Ind.
Keeney, S. L., 221 Clermont, av., B'klyn, N. Y.
Kellar & Bush, Lancaster, Pa.
Kellar & Gall, Lancaster, Pa.
Kellar, John, Lancaster, Pa.
Kellar & Reilly, Lancaster, Pa.
Kelley, P., Fernandina, Fla.
Kelley, P. H., Portsmouth, O.
Kelley, T. H., Sawyer, Mich.
Kelly, Geo., North Branch, Mich.
Kelly, John, Lynchburg, Va.
Kelly, J. L., 638 Market st., San Francisco, Cal.
Kelly, M. J., 2912 California st., San Francisco, Cal.
Kelly, Patrick, care E. H. Wells, Tyler, Tex.
Kelly, Patrick, Altoona, Pa.
Kelso, J., 242 Shotwell st., San Francisco, Cal.
Kennedy, J. T. & A. B., Sergeant Bluffs, Ia.
Kennedy & Stone, Topeka, Kan.
Kenricks, W. A., Boston, Mass.
Kerns, Thos. F., Pottsville, Pa.
Kerr, W., 903 Battery st., San Francisco, Cal.
Kiernan, Michael, Brighton, Mass.
Kilpatrick Bros., Oregon, Ill.
KILPATRICK BROS. & COLLINS, Beatrice, Neb.
King & Dyer, Mahanoy City, Pa.
King, M. S., Des Moines, Ia.
Kinsman, C. W., 536 Ellis st., San Francisco, Cal.
Kirkendell & McLune, Helena, Mont.
Klotz, L. E., Mauch Chunk, Pa.
Knight & Bedlow, 239 Federal st., Portland, Me.
Knight & Bonticon, P. O. Box L, Kansas City, Mo.
Knox, J. P. & R. H., Allegheny, Pa.
Kuhn, W. G., McKeesport, Pa.
Kyner, I. H., Omaha, Neb.
Lacey, Chas., Keokuk, Ia.
Lai Fong Company, Portland, Or.
Lally, M., Detroit, Mich
Lane & Bodley, John and Water sts., Cincinnati, O.
Lane, M. D., St. Augustine, Fla.
Lang, G., 28 N. Montgomery st., San Francisco, Cal.
Langdon, R. B. & Co., Minneapolis, Minn.
Langdon, Winston & Co., St. Paul, Minn.
Langford & Bridges, Portland. Ore.
Langford, John T., 70 Kilby, st., Boston, Mass.
Langhorne, C. D., Richmond, Va.
Lantry, B. & Sons, Strong City, Kan.
La Pierre, F. H., Montreal, Que.
Larsen & Anderson, Seattle, Wash'n Ter.
Larson & Keefe, Helena, Mont.
Lary, Valentine L., Hoboken, N. J.
Latcha, J. A., Marquette, Mich.
Latham, L. D. & Co., Winfield, Kan.
Latham, L. D. & Co., 163 Dearborn st. (Room 210), Chicago, Ill.
Lathrop, Austin, Corning, N. Y.
Lathrop, Joseph, 225 Dearborn st. (Room 15), Chicago, Ill.
Lauer Bros., St. Paul, Minn.
Lawless, A., Hanging Rock, O.
Lawrence, R. D., Springfield, Ill.
Lawrence, R. D. T., Marietta, Ga.
Leach & Baldwin, 112 S. 8th st., Phila., Pa.
Learned, A. J. C., 5 Charles st., Providence, R. I.
Leavett, J. H., 11 Eaton st., Boston, Mass.
Leck, C., 436 Montgomery st., San Francisco, Cal.
Lee, John C., Council Bluffs, Ia.
Lee & Garvey, Memphis, Tenn.
Lee, P. & Son, Paterson, N. J.
Lentz & Co., Vosburgh, Pa.
Lepe, Chas., Denver, Col.
Lessig, M., Chicago, Ill.

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Linehan, D. W., Dubuque, Ia.
Lindsley, D., Ottawa, Can.
Linton, A. H., Minneapolis, Minn.
Livingston, C. E., 839 N. 22d st., Phila., Pa.
Lochlin, Rob't Hamnondsport, N. Y.
Lodor, D., Windsor Hotel, Trenton, N. J.
London, E., Fort Dodge, Ia.
Long, E. C. & Co., St. Paul, Minn.
Lost, Lewis M., Rochester, N. Y.
Lowe, M. B. & Co., Atlanta, Ga.
Lutes, R. P., Indianapolis, Ind.
Lyman, J. E., Cedar Rapids, Ia.
Lyons, G. E., Greenfield, Mass.
McArthur, W. & A., Sheboygan, Mich.
McArthur Bros., St. Paul, Minn.
McCabe, Jno. R., No. Berwick, Me.
McCabe, L. B. & Bro., Port Deposit, Md.
McCann, Thos., B'klyn, N. Y.
McCann, T. K., Steubenville, O.
McCarthy, J. H., Little Rock, Ark.
McCarthy Bros., Franklin, Mass.
McCauley & Gill, Phillipsburg, Pa.
McClallan, W. C., U. S. Hotel, Boston, Mass.
McClallan & Co., Springfield, Mass.
McClure, Jas., St. Paul, Minn.
McClure, J. E., Hudson, N. Y.
McClure & Schuler, Bissel Blk., Pittsb'gh, Pa
McCormack, Ed., Washington, Ia.
McCormick, R. P. & Co., Kansas City, Mo.
McCracken, W. V. & Co., 42 Wall st., N. Y.
McCune, A., Butte, Mont.
McDermid & Hendrie, Detroit, Mich.
McDonald & Penfield, Fremont, Neb.
McDonald, A., Toronto, Ont.
McDonald, Donald, Horton, Mich.
McDonald, Hugh, Horton, Mich.
McDonald, John, Escuminac, Que.
McDonald & Heald, Chatham, Ont.
McDonald & Snea, Vicksburg, Miss.
McDonnell, A., Grand Rapids, Mich.
McDonell Bros., Grand Rapids, Mich.
McDougal, J. C., Henderson, Ky.
McDougall & Chesholm, Campbell, N. B.
McFadden, Chas., Phila., Pa.
McFadden, C. & Son, Stony Creek, Pa.
McFadden, C. & Tallman, Phila., Pa.
McFarlane, Henry, Toronto, Ont.
McGann, Geo., Toronto, Ont.
McGaw, Alex., 410 Walnut st., Phila., Pa.
McGee, Geo. J., Corning, N. Y.
McGovern, Jos. P., Balt., Md.
McGovern & Co., Tyrone, Pa.
McGregor, Kennedy & Co., Escuminac, Que.
McHenry, Henry, Horseheads, N. Y.
McIntire, J. E., 22 W. Seneca st., Buffalo, N. Y.
McKee, Chris., Belle Valley, O.
McKenzie, D. P., Dunham, Ala.
McLain, Louis, Sanford, Fla.
McLaughlin, John, Wymore, Neb.
McLaughlin, P. R., Junction City, O.
McLaughlin & Reilly, 4933 Wayne av., Phila., Pa.
McLean, Louis, Sanford, Fla.
McLeod & Sparks, Fort Smith, Ark.
McLeon, J. H., Coldwater, Mich.
McMahon & Green, Staunton, Va.
McMahon, Shannahan & Green, Covington, Ky.
McManus, Patricius, 3208 Spencer Terrace, West Phila., Pa.
McMurtrie & Woodward, Sault Ste. Marie, Mich.
McNamara, Thos., Kansas City, Mo.
McNamara, W. C., Sioux City, Ia.
McNary, J. D., St. Joseph, Mo.
McNichol, D, 1312 Race st., Phila., Pa.
McRae & Lally, 75 Windsor st., Detroit, Mich.
McTague, Peter, Lancaster, Pa.
McTague, S., Camden, N. J.
McTighe & Co., Memphis, Tenn.
McWilliams, Jos., Council Bluffs, Ia.
Machen, E. C., Macon, Ga.
Macklin, James, Newburgh, N. Y.
Macomber, H. G., 66 Matthewson st., Providence, R I.
Maddock & Evans, Roanoke, Va.
Madeville & Grace, St. Louis, Mo.
Magann, G. P., 174 King st., E., Toronto, Ont.
Magary, J. E., 528 California st., San Francisco, Cal.
Magnes, M. C., 12 B'way, N. Y.
Malone, Bernard, Columbia, Pa.
Malone, Richard, Lancaster, Pa.
Malone Bros., Lancaster, Pa.
Malloy, S. H., Charlton, Ia.
Mallory & Cushing, Omaha, Neb.
Maney, Thos. F. & Co., 101 Milk st., Boston, Mass.
Mangan, P. A., Wymore, Neb.
March, James, Lebanon, Pa.
Marcellus, A., Oneida, N. Y.
Mars & Miller, 61 N. Wells st., Chicago, Ill.
Marsh, Luckey, Fort Madison, Ia.
Martin, Wm., Emmettsburgh, Ia.
Mason, Gooch & Hoge Co., Frankfort, Ky.
Mason, Hoge & Co., Frankfort, Ky.
Mason, H. P. & Silas, Staunton, Va.
Mason, R. B., S. Branch Dock Co., Chicago, Ill.
Mason, Rosser & Dickey, Staunton, Va.
Masser, J. G., Cadillac, Mich.
Massillon Bridge Co., Massillon, O.
Matson, John, Toronto, Ont.
Mayhew, Chas., Columbia, S. C.
Mayo, W. G., 35 Hawley st., Boston, Mass.
Melcher, C. W., 620 Chestnut st., St. Louis, Mo.
Mengis, M. C., 12 B'way, N. Y.
Messhon, H., Anderson, Ind.
Metallic Street Railway Supply Co., Albany, N. Y.
Miller, D. J., 234 B'way, N. Y.
Miller, D. L., Lock Haven, Pa.
Miller, H. B., Grant's Pass, Ore.
Miller, John C., Bangor, Pa.
Miller Bros., 212 S. Water st., Chicago, Ill.
Miller, D. E & Co., 17 Paca st., Balt., Md.
Miller & Loomis, 60 S. Clinton. st., Chicago, Ill.
Miller, Loomis & Gill, Chicago, Ill.
Miller, McCann & Co., Steubenville, O.
Miller, McDonald & Co., Fremont, Neb.
Miller & McDonald, Spencer, Ia.
Milligan, A. B., Harrisburg, Pa.
Mills, J. E., Quincy, Cal.
Mitchell, Jas., Melrose, Mass.
Mitchell, Jas., Belfast, Me.
Mitchell, R. P. & Co., Ottawa, Ont.
Minahan, D. F., 132 Linden av., Springfield, O.
Mock, Eugene, Beatrice, Neb.
Moffett, Hodgkins & Clarke, Watertown, N. Y.
Molloy, John J., Louisville, Ky.
Monroe, A., Lawrence, Kan.
Montgomery, J. A., Birmingham, Ala.
Montgomery, J, B., Portland, Ore.
Montgomery, J. S., Starkville, Miss.
Montgomery, Wright & Co., Birmingham, Ala.
Moore, Allen, Newton, Kan.
Moore, Robt., 325 Chestnut st., St. Louis, Mo.
Moore & Wright, 41 Commercial st., Portl'd, Me.
Morris, Marshall, Louisville, Ky.
Morris & Cummings, 45 Duane st., New York.
Morris, Serpell & Co., Henderson, Ky.
Morrison, C. K., 58 Trenton st., Boston, Mass.
Morrison, C. K., Jr., 35 Hawley st., Boston, Mass.
Morrison & Jackson, Lock Haven, Pa.
Morrison, W. W. & Co., Lock Haven, Pa.
Mott, E. H., Hannibal, Mo.
Muchler, S., Phillipsburg, N. J.
Muir Bros., St. Paul, Minn.
Mullins, Robt. F., 10 Wall st., N. Y.
Murphy, J. D. Charleston, S. C.
Murray, John, Cedar Rapids, Ia.
Myer, H. P., Louisville, Ky.
Myers, Thos. & Son, Albany, N. Y.
Myrick, Bowman & Co., Holton, Ga.
Natchler, J. T., 125 1st av., Pittsb'gh, Pa.
Nead, W. J., 1525 Girard av., Phila., Pa.
Neftel & Outhout, 41 Liberty st., N. Y.
Nevins, J. H., Minneapolis, Minn.
Newmaker, W. A., Tionesta, Pa.
Newman, J. J., Providence, R. I.
Newman, Thos., 147 Driggs st., B'klyn, E. D., N. Y.
Newton, D. H. & J. C., Holyoke, Mass.
Niagara Bridge Works, Buffalo, N. Y.
Nixon, W. J., Lawrenceburg, Tenn.

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Nolan, Thos., Reading, Pa.
Nolan, Wm., Reading, Pa.
Nolan Bros., Reading, Pa.
Nolan & O'Reilly, Reading, Pa.
Norcross Bros., Worcester, Mass.
Nordyke & Marmon, Indianapolis, Ind.
Norton, Wm., Waterville, Me.
Norton, W. A. 35 Hawley st., Boston, Mass.
O'Brien, John, Rhinebeck, N. Y.
O'Brien, M., care Valley R. R., Cleveland, O.
O'Brien Bros., Fort Dodge, Ia.
O'Brien, E. J. & M. M. A., St, Paul, Minn.
O.Brien & McDonald, Renfrew, Ont.
O'Brien & Rogers, Sideling Hill, Pa.
O'Connor, Jas., Oswego, N. Y.
O'Hara Bros., Cedar Rapids, Ia.
O'Hara, Pat'k, Brownwood, Mo.
Olson, John, Grand Rapids, Mich.
Orcutt, C. H., 619 Walnut st., Phila., Pa.
Oregon Construction Co., Portland, Ore.
Orman, Crook & Co., Pueblo, Col.
Oviatt, S. B., Farmingdale, N. J.
Owens, David, Newton, Ia.
Owens, H. E., Newton, Ia.
Paddock, G. H., 135 S. Main st., Providence, R. I.
Page, P., Scranton, Pa.
Paige, David R., Akron, O.
Paige, Cary & Co., Yonkers, N. Y.
Palmer & Story, 318 Pine st., San Francisco, Cal.
Pambrook, Geo., Livingston, Ky.
Paramore, F. W. & Co., St. Francis, Ark.
Parker, C. E., Ottumwa, Ia.
Parker, C. W., 35 Hawley st., Boston, Mass.
Parquet & Smith, 35 Hawley st., Boston, Mass.
Patterson, J. C., Phila., Pa.
Patton, E. B., North Adams, Mass.
Paul, John & Co., Tippecanoe, O.
Pearce, S. B., 151 Richmond st., Providence, R. I.
Pennsylvania & New England Construction Co., 133 S. 4th st., Phila., Pa.
Peoples, Robt., Denmark, Ia.
Perkins Bros., Birmingham, Ala.
Perkins, J. P. & Son, 256 Main st., Boston, Mass.
Peterson, Chas., 62 Pearl st., Buffalo, N. Y.
Pfeffer, J. F. & Co., 709 Coleraine av., Cincinnati, Ohio.
Phelps, Geo. B., Watertown, N. Y.
Phelps, Geo. W., Mt. Morris, N. Y.
Phelps, L. N., Lexington av., Columbus, O.
Philbrook, J., Portland, Me.
Pidgeon, Frank, 116 Wall st., N. Y.
Pillsbury, J. J. & Co., Atlanta, Ga .,
Pitman, W. C., Banger, Me.
Pitman & Chambliss, Bartow, Fla.
Pitts, D. H. & Co., Scottsville, Va.
Poole & Hunt, Baltimore, Md.
Porter, Chas. A., 1920 W. 13th st., Phila., Pa.
Post & McCord, 102 B'way, N. Y.
Potts, Geo. S., Farmingdale, N. J.
Powell, E. T., Staunton, Va.
Powers, John H., Macon, Ga.
Price, John P., Topeka, Kan.
Price, McGavock & Co., Topeka, Kan.
Prosser, T. J. & Co., Superior, Neb.
Pruyn-Bambrick Construction Co., St. Louis, Mo.
Pugh & Russell, 280 B'way, N. Y.
Purcell & Grace, Memphis, Tenn.
Putnam & Tobias, New Orleans, La.
Quigley, J. F., Wilmington, Del.
Randolph, A. B., Jacksonville, Fla.
Raymond, James, 45 B'way, N. Y.
Raymond & Campbell, Council Bluffs, Ia.
Read, S. P & Co., 281 Fountain st., Providence, R. I.
Ready, David, Oil City, Pa.
Rehill, John, Somerville, N. J.
Reil, Hugh, Elizabeth, N. J.
Reilly, James, Springfield, Mo.
Reilly, T. A., Pottsville, Pa.
Reilly & Nolan, Reading, Pa.
Rexford Bros., 29 Broad st., N. Y.
Rexford & Co., 135 Pearl st., N. Y.
Rexford Bros. & Hodge, Sage Junction, Mich.
Reynolds, E. P. & Co., Rock Island, Ill.
Rice, Geo., Pottstown, Pa.
Rice & Coleman, Laurens, S. C.
Richards, C. O. & Co., 15 Cortlandt st., N. Y.
Richardson, W. L., 14 Howard st., San Francisco, Cal.
Ricker, & Lee, Galveston, Tex.
Rickert, T. H., Pottsville, Pa.
Ring, Martin, Minneapolis, Minn.
Robinson, J. E., Phila., Pa.
Robinson Bros., Mt. Forest, Ont.
Rodemer, J. C. & Co., Gallatin, Tenn.
Roe Bros , Reading, Pa.
Rogers, R. H., Ferrona, N. Y.
Rogers & Ballantyne, P. O. Box 2566, New Orleans, La.
Rooney, W. E., Toledo, O.
Roosevelt, Warren, 257 South st., N. Y.
Ross, J., Ipswich, Mass.
Ross & Lord, 35 Hawley st., Boston, Mass.
Ross & Sanford, 113 Hudson st., Jersey City, N. J.
Ross & Swank, 16 Sampson st., Allegheny, Pa.
Rouse, R. R., 31 W. Maryland av., Indianapolis, Ind.
Rowan, D. G., St. Catharines, Ont.
Ruark, E. W., Baltimore, Md.
Rusling, G. M., Hackettstown, N. J.
Russell & Burk, 18 Howard st., Boston, Mass.
Rutherford, John W., 145 B'way, N. Y.
Ryan, C. H., Russellville, Ky.
Ryan, James J., 1126 N. 40th st., Phila., Pa. **78.**
Ryan, J. J., 3962 Girard av., Phila., Pa.
Ryan, J. K., Ware, Mass.
Ryan & McDonald, Baltimore, Md.
Sackett Bros., Springfield, Mass.
Safety Electric Construction Co., 41 Wall st., N. Y.
Salpaw, G. W., Charleston, Tenn.
Sands, J. A., 15 Public Landing, Cincinnati, O.
Saulpaugh, T. & Co., Minneapolis, Minn.
Savage, James, Augusta, Me.
Sawyer, C. H. & R. W., 7 R. R. Block, Bangor, Maine.
Saxton, Edmund, Kansas City, Mo.
Schmidt, Chas., Winfield, Kan.
Schneider, C. C., 35 B'way, N. Y.
Schultz, C. J., Iron City Bridge Works, Pittsb'g, Pa.
Scobie, James, Delta, Cal.
Scott Bros., Rich Hill, Mo.
Scott, John & Sons, St. Louis, Mo.
Searles, Wm. H., Cleveland, O.
Seeds, J. R. D., Wilmington, Del.
Seeds, W. F., Wilmington, Del.
Seldon, H. P., & Co., Kansas City, Mo.
Seldon, L. H., L'Anse, Mich.
Seymour, S. M., Danville, N. Y.
Shanahan, Denis, Louisville, Ky.
Shanahan, T. R., Portland, Me.
Shanahan, Thos. & Sons, Portland, Me.
Shanley, B. M. & J. F., 16 Exchange pl., Jersey City, N. J.
Shaw, J., 35 Hawley st., Boston, Mass.
Shean, Daniel, Dubuque, Ia.
Shenfield, Conrad, 234 S. 4th st., Phila., Pa.
Shepherd, D. C., St. Paul, Minn.
Sheridan, A., St. Joseph, Mo.
Sheridan, D., St. Joseph, Mo.
Shoulton, Theodore, Port Huron, Mich.
Shumway, P. B., 169 E. Jackson st. (Room 608), Chicago, Ill.
Sias, M. P., 35 Hawley st., Boston, Mass.
Simpson, Alex., Albany, N. Y.
Simpson & Jordan, Seattle, W. Ter.
Skeele, Frank H., 45 B'way, N. Y.
Skelsey, E., Des Moines, Ia.
Skinner Bros., Kansas City, Mo.
Small, W. H., Walla Walla, Wash'n Ter.
Smith, B. F., 266 Wash'n st., Boston, Mass.
Smith, B. P., Rochester, N. Y.
Smith, C. C., Lacrosse, Wis.
Smith, C. D. & Co., Birmingham, Ala.
Smith, E. D., 151 N. 16th st., Phila., Pa.
Smith, F. H., 13 German st., Balt., Md.
Smith, James N., B'klyn, N. Y.
Smith, J. W., Oakland, Cal.
Smith, J. S., 410 Walnut st., Phila., Pa.
Smith, L. P. & J. A., Cleveland, O.
Smith, R. D., Birmingham, Ala.
Smith & Ripley, 61 B'way, N. Y.

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Phelps, Dodge & Co., 11 Cliff st., N. Y.
Quincy, John W. & Co., 98 William st., N. Y.
Rathman, H., 53 to 57 Water st., Buffalo, N. Y.
Revere Copper Co., 47 Kilby st., Boston, Mass.
Revere Copper Co., 242 South st., N. Y.
Richards & Co., 60 Union st., Boston, Mass.
Ringler, F. A. & Co., 21-23 Barclay st. & 26 Park pl., N. Y.
Rome Brass and Copper Works, Rome, N. Y.
Ruckel, J. H. & Co., 81 Main st., Buffalo, N. Y.
St. Genevieve Copper Works, St. Genevieve, Mo.
Scott, Jas. B. & Co., 122-124 2d av., Pittsb'g, Pa.
Selby, T. H. & Co., 116-118 California st., San Francisco, Cal.
Slover & Tyler, 47 South st., N. Y.
Swindell Construction Co., Lewis Blk, 605 Smithfield st., Pittsb'g, Pa.
Taunton Copper Mfg. Co., 11 Broad st., Boston, Mass., Taunton, Mass., and 232 South st., N. Y.
Tay, G. H. & Co., 614 Battery st. San Francisco, Cal.
Texas Copper Mining and Mfg. Co., Dallas, Tex.
Tragester, John, 447 W. 26th st., N. Y.
U. S. Mineral Wool Co., 173 B'way, N. Y.
Wallace & Sons, 89 Chambers st., N. Y.
Whitney & Marshall, 22 Fremont st., San Francisco, Cal.

Copper Ingots.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Blatchford, E. W. & Co., Chicago, Ill.
Pope, Thos. J. & Bro., 292 Pearl st., N. Y.
Williams, E. A. & Son, 109 Plymouth st., Jersey City, N. J. x.

Copper—Sheets.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Bridgewater Iron Co., Bridgewater, Mass.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Hussey, C. G. & Co., 49 5th av., Pittsburgh, Pa.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
New Bedford Copper Co., New Bedford, Mass.
Park Bro. & Co., Pittsburgh, Pa.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Merchant & Co., 525 Arch st., Phila., Pa.
Stender & Schluederberg, 151 1st av., Pittsb'g, Pa.
Van Noorden, E. & Co., 387 Harrison av., Boston, Mass.

Copper Smelters.

Orford Copper Co., 37-39 Wall st., N. Y
Wallace & Sons, Ansonia, Conn.

*Coppersmith. (R. R. Work.)

Wilson, D. H. & Co., 179 Central st., Lowell, Mass.

Copper and Sheet Iron Workers for R. R. & S. S. Ornamental Work.

Architectural Iron & Metal Works, 288 Dyer st., Providence, R. I.
Kattentidt, C., 113-119 Michigan st., Chicago, Ill.

Copperas.

Cutler, Wm. E. & Co., Worcester, Mass.

Cord—Rubber.

Bishop Gutta Percha Co., 420 E. 25th st., N. Y.
Boston Belting Co., 256 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Gutta Percha & Rubber Mfg. Co., c. Warren & Church sts., N. Y.
Home Rubber Co., Trenton, N. J.
Trenton Rubber Co., Trenton, N. J.

Cord—Sash.

Tolman, J. P. & Co. (Samson Cordage Works), 164 High st., Boston, Mass. 47.
Wellington, H. W., 82 Chauncey st., Boston, Mass.

Cords—Telephone.

American Electrical Works, 67 Stewart st., Providence, R. I.

Cord—Ventilator.

Tolman, J. P. & Co. (Samson Cordage Works), 164 High st., Boston Mass. 47.

Cordage—Rope and Twine.

Abbott, Horn & Co., Columbus, O.
Adams, N., Lansingburg, N. Y.
Adams Bros. & Co., Utica, N. Y.
Akron Twine & Cordage Co., Akron, O.
Allen's, D., Sons, Roebling, n. 3d av., B'klyn, N. Y.
Allen's, D. & Sons, 166 Front st., N. Y.
American Cord Mfg. Co., 1136 Catharine st., Phila., Pa.
American Electrical Works, Providence, R. I.
Andrews, L. C., 53 2d av., Pittsb'g, Pa.
Anthony, E. L., Coventry, R. I.
Arkerson, L., 299 Western av., Boston, Mass.
Arkerson Bros., 299 Western av., Boston, Mass.
Atherton, Thos., 84 George st., Chicago, Ill.
Atlas Steam Cordage Mfg. Co., 125 S. Peter's st., New Orleans, La.
Atwater, W. J. & Co., 956 to 960 Grand st., New Haven, Conn.
Austin, D. S. & Co., ft. of Wash'n st., Buffalo, N. Y.
Bailey, J. T. & Co., c. Exchange Bldg, Balt., Md. Philadelphia, Pa.; 169 E. Jackson st. (Room 417), Chicago, Ill.
Baker, Howard H. & Co., 18 to 26 Terrace st., Buffalo, N. Y.
Barnett, J., 176 Hamburg st., Brooklyn, N. Y.
Baumgardner, Woodward & Co., 38 Delaware av., Phila., Pa.
Beebis, C., 3712 Lucky st., St. Louis, Mo.
Beinert, F., Sullivan av., St. Louis, Mo.
Belknap, W. B. & Co., 115 to 121 W. Main st., Louisville, Ky.
Bentley & Gerwig (Ltd.), 218 Washington st., Chicago, Ill.
Bergner, W., Peoria, Ill.
Bishop Gutta Percha Co., 420 E. 25th st., N. Y.
Boeckmann, F., Sullivan, av., St. Louis, Mo.
Bonte, G. H. & Co., 47 Lock st., Cincinnati, Mo.
Bonte's, J. Sons, Dayton, Ky.; 8 Main st., Cincinnati, O.
Boston Cordage Co., 3 Commercial st., Boston, Mass.
Bradley, Robert B. & Co., 406-408 State st., New Haven, Conn.
Branch Office Baltimore Twine & Net Co., 235 Pearl st., N. Y.
Brundage, Edw. H., 118 Chambers st., N. Y.
Butler B., Middletown, Conn.
Cable Flax Mills, 113 Worth st., N. Y.
Campbell, A., Wilmington, Del.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. 31.
Channon, H., Co., 26 S. Market st., Chicago, Ill.
Chester, A. A., 29 Kensington av., Phila., Pa.
Chisholm, J., Salem, Mass.
Church, A., 33 Morgan st., Hartford, Conn.
Claffy, John, 48 Dey st., N. Y. 91.
Coburn, C. B. & Co., Lowell, Mass.
Conkle, H. C., 4 S. 3d st., Phila., Pa.
Conway, John M. & Co., 113 Worth st., N. Y.
Covel & Osborn, 71 Pleasant st., Fall River, Mass.
Coyle & Coyle, 401 Commerce st., Phila., Pa.
Crandall, H. L. & Co., Hopkinton, R. I.
Cupples, S., 300 N. 2d st., St. Louis, Mo.
Cushing, Morris & Co, 381 Water st., Bridgeport, Conn.
Daniel & Co., Manchester, N. H.
Darrow, A. R., New London, Conn.
Darrow & Comstock, New London, Conn.

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Davison, John & Son, 282 S. Water st., Chicago, Ill.
Day Cordage Co., 74-76 Commercial st., Boston, Mass.
De Graw, Aymar & Co., 34 South st., N. Y.
Domhof, N., Dayton, Ky.
Donaldson, J. P. Co. (The), 22 Woodward av., Detroit, Mich.
Donnell, J. T. & Co., Bath, Me.
Dower, J., Hingham, Mass.
Downard, J., Wilmington, Del.
Dravo, James S. & Co., 121 Water st., Pittsburgh, Pa.
Dresser, J. W., Castine, Maine.
Dunham, Geo. B. & Co., 264 S. Water st., Chicago, Ill.
Dunham, T. H., 19 Congress st., Boston, Mass.
Eckert, C. A., 1174 1st av., Cleveland, O.
Elder, J. 4711 Baird st., Germantown, Pa.
Elizabethport Steam Cordage Co., 46 South st., N. Y. 20.
Endicott, C. G., Jersey City, N. J.
Felix & Marston, 9 Wabash av., Chicago, Ill.
Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.
Ferris, G. H., S. Norwalk, Conn.
Field, J., 43 Exchange st., Rochester, N. Y.
Filter, Edwin H. & Co., 23 N. Water st., Phila., Pa.
Finley & Co., Crescentville, Pa.
Finney & Channon, 270 S. Water st., Chicago, Ill.
Flocker, John & Co., Allegheny, Pa.
Fogg, G. R., 3408 Germantown av., Phila., Pa.
Frazier, L. I., 1432 N. 23d st., Phila., Pa.
Freed, W. C., 3904 Germantown av., Phila., Pa.
Fricke, J. E., 255 Market st., Phila., Pa.
Frick, M., 3212 Germantown av., Phila., Pa.
Fulton, Bollman & Co., 111 Water st., Pittsb'g, Pa.
Gade, Henry, 349 Broome st., N. Y.
Gerwig & Sons, 1303 Penn av., Pittsb'g, Pa.
Gilmore, E. W., & Co., N. Easton, Mass.
Glover, Lewis C., 20 Cliff st., N. Y.
Good, John, 280 B'way, N. Y.
Goss, G. W., Lynn, Mass.
Graham, J., Hingham, Mass.
Grenough & Co., 1040 Mary st., Louisville, Ky.
Grover, J. W. & Son, 117 River st., Cleveland, O.
Gurdy, H. O. & Co., Camden st., Rockland, Me.
Hale, B. S. & Son, 31 Otis st., Boston, Mass.
Hamell & Stubbs, 46 N. Del. av., Phila., Pa.
Hart, A. H., Co., 90 White st., N. Y.
Hawley, T. & Co., 397 Water st., Bridgeport, Conn.
Heckel, C., Nat. Bridge Road, St. Louis, Mo.
Helmm, J., St. Joseph, Mo.
Heinold Bros., 15 S. Market st., Chicago, Ill.
Hingham Cordage Co., Hingham, Mass.
Hite, W. W. & Co., 176 4th st., Louisville, Ky.
Hobart, Frank B. & Co., 92 White st., N. Y.
Hooper, Wm. E. & Sons, 2d and Frederick sts., Balt., Md.
Howe & Co., 181 River st., Troy, N. Y.
International Fibre Co., 32 Broad st., N. Y.
Jackson, T. & Son, Reading, Pa.
Jacobs, Chas. C. Cordage Co., 65 Walnut st., Cincinnati, O.
Johnston, W. N., Zanesville, O.
Johnson Bros., 403 E. Pratt st., Balt., Md.
Jones, C. T., 27 S. 7th st., Phila., Pa.
Kay Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Kelley, Henry C., 548 Pearl st., N. Y.
Kendall, J. & Co., Lowell, Mass.
Kilbourne, Jones & Co., Columbus, O.
Kistner, W., Kossuth av., St. Louis, Mo.
Klinefelter Bros., 301 & 303 E. Pratt st., Baltimore, Md.
Lawrence Line Co., Lawrence, Mass.
Lawrence Rope Works (The), 160 Front st., N. Y.
Lawrence & Cooper, Maspeth av., c. Morgan av., B'klyn, N. Y.
Leighton, A. W., Weathersfield, Vt.
Leschen, A. & Sons, 908 N. Main st., St. Louis, Mo.
Lewis, Herald R., 201 E. Lake st., Chicago, Ill.
Lewis, H. R., E. Lewis, c. Division st., Phila., Pa.
Lewis & Loper, 115 N. 2d st., Phila., Pa.
Lexington Cordage Co., Lexington, Ky.
Lindsay, N., Fall River, Mass.
Lord, R. W. & Co., Kennebunk Depot, Me.
Loseman, H., Nat. Bridge Road, St. Louis, Mo.
Loveland, J. & Co., Milwaukee, Wis.
Luther, J. F., Grand, c. Waterbury st., B'klyn, N. Y.
McComesky, J. E., Butler, n. Kensington av., Phila., Penn.
McComesky, T., 3616 Frankford av., Phila., Penn.
McGraw, M., Tchoupitoulas, c. Natch st., New Orleans, La.
Martin, G. A., Lancaster, Pa.
Martin, Thos., 60 Harrison st., N. Y.
Maxwell, J., Saratoga av., c. Prospect pl., B'klyn, N. Y.
May Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Mealy, S. A., 895 River st., Troy, N. Y.
Miller, John B., 201 E. Lake st., Chicago, Ill.
Molson & Sons, Portland, Ore.
Montgomery, J. H., 109 Ohio st., Buffalo, N. Y.
Moore, C. & Co., 12 S 5th st., Phila., Pa.
Moore, Robert, 150 1st av., Pittsburgh, Pa.
Morris, J. C., 40 Tchoupitoulas st., New Orleans, La.
Morrison, R., Old Manchester Road, St. Louis, Mo.
Morton, M. B., Amherst, Mass.
Mount Vernon Co., Lombard, c. Cheapside st., Balt., Md.
Myer, Bridges & Co., 581 W. Main st., Louisville,
National Cordage Co., 141 Front st., N. Y.
Nawrath, J. P. & Co., 2 Lispenard st., N. Y.
New Bedford Cordage Co., 91 Commercial st., Boston, Mass.; New Bedford, Mass.
Newburg, G. D., West Troy, N. Y.
Nippert, M. & Co., 163 4th st., Louisville, Ky.
Noltemeyer, B., 1224 Rogers st., Louisville, Ky.
Oswald, L., 6 S. 3d st., Phila., Pa.
Overman & Schrader, Covington, Ky.
Pacific Cordage Co., 318 California st., San Francisco, Cal.
Payne, Geo., 7th st. bey. Magnolia av., Louisville, Ky.
Pearson Cordage Co., 55 Kilby st., Boston, Mass.
Perkins Machinery Co., Atlanta, Ga.
Phelps, W. S. & Sons, Dayton, O.
Pioneer Twine Mills, New Brighton, Pa.
Plymouth Cordage Co., 5 Chatham Row, Boston, Mass.; Plymouth, Mass.
Randall, Goodale & Co., 95 Commercial st., Boston, Mass.
Rawson, C. E. & Co., 641 W. Main st., Louisville, Ky.
Reading Steam Cordage Works, Reading, Pa.
Reid, A. F., 149 Duane st., N. Y.
Richle Bros., 50 S. 4th st., Phila., Pa.
Robbins, W. N., Essex, Conn.
Rose, L. W., Columbus, O.
Round, R. M., Columbus, O.
Rudd, R., Ralph av., n. St. Marks av., Brooklyn, N. Y.
Rumsey, L. M. Mfg. Co., 806 N. 2d st., St. Louis, Mo.
Sans Souci Twine Mills, 349 Broome st., N. Y.
Schlichter Jute Cordage Co., 21 N. Front st., Phila., Pa.
Schoneman, C., 318 Market st., Phila., Pa.
Scott & Bro., Lexington, Ky.
Sewall & Day Cordage Co., 83 Commercial st., Boston, Mass.
Shattuck, H. B., Lowell, Mass.
Silsby, J. H., 174 Jay st., Albany, N. Y.
Silver Lake Co., 82 Chauncey st., Boston, Mass.; Newton, Mass.
Sloan, R., Kansas City, Mo.
Slover & Tyler, 47 South st., N. Y.
Sauntag, C. & Co., 116 Market st., San Francisco, Cal.
Standard Cordage Co., 212 Camden st., Boston, Mass.
Stiegemeier, H., 1079 Forest st., Cleveland, O.
Stoneman, M. G. & Son, 55 Quay st., B'klyn, N. Y.
Strasser, W. G., E. Butler st., N. Kensington av., Phila., Pa.
Sturges, Thos. L., E. 150th st., c. River av., N.Y.

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Suffolk Cordage Co., 56-58 & 60 Commercial st., Boston, Mass.
Sypher, J. B., Douglass st. N. B'klyn av., B'klyn, N. Y.
Taylor, F. & Co., Lowell, Mass.
Thomas, B., 117 Market st., Phila., Pa.
Thomas, D. T., 214 Elm st., Cincinnati, O.
Thompson, James & Co., 75 Market st., Chicago, Ill.
Tolman, J. P. & Co. (Samson Cordage Works), 164 High st., Boston, Mass. **47.**
Train, Dorr & Co., 74-76 Commercial st., Boston, Mass.
Travers Bros., 107 Duane st., N. Y.
Travers, J. P. & Son, 46 Beekman st., N. Y.
Tubbs & Co., 613 Front st., San Francisco, Cal.
Tucker & Carter Cordage Co., 101 Classon av., B'klyn, N. Y.; 98 Pine st., N. Y.
Uhler & English, 100 N. Del. av., Phila., Pa.
United States Cord Co., Lowell, Mass.
U. S. Net & Twine Co., 199 and 210 Fulton st., N. Y.
U. S. Waterproofing Fibre Co. (Ltd.), 56 South st., N. Y.
Upson, Walton & Co., 159 River st., Cleveland, O.
Vandyke, C. C., 245 Market st., Phila., Pa.
Victoria Cordage Works, 201 Lake st., Chicago, Ill.; Division and Thompson sts., Phila., Pa.
Wall, N., Hingham, Mass.
Wall's, W. Sons, Seigel st., c. Bush'k av, B'klyn, N. Y.; 113 Wall st., N. Y.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Waterbury, L. & Co., 245 Atlantic av., Boston, Mass.; 108 Waterbury st., B'klyn, N. Y.; 139 Front st., N. Y.
Watts, Parker & Co., 75 Front st., N. Y.
Way & Co., 344 Main st., Hartford, Conn.
Weaver, C. A. & Co., New London, Conn.
Wellington, H. W., 82 Chauncey st., Boston, Mass.
Werne, T., Dayton, Ky.
Wetherbee, G. C. & Co., 49 Jefferson av., Detroit, Mich.
Wetherbee, Williams & Co., 11 Larned st., Detroit, Mich.
White, John E., 38 Wabash av., Chicago, Ill.
Whitlock, W., Jr., 46 South st., N. Y.
Whiton, M. F. & Co., 31 Commercial st., Boston, Mass.
Wilcox, M. I., Toledo, O.
Wilmington Mills Mfg. Co., Wilmington, Del.
Winnie, D. P., 338 B'way, N. Y.
Xenia Twine & Cordage Co., Xenia, O.
Yelima, J. H., Lexington, Ky.
Young, W. M., 3438 Frankford av., Phila., Pa.

Cornices.

Bakewell & Mullins, Salem, O.
A. Butch Cornice Works, 310 E. 5th st., Dayton, O.

*Corrosion Preventative in Steam Boilers.

Lord, Geo. W., 316 Union st., Phila., Pa. **81.**

Cotton Duck and Canvas.

Baumgardner, Woodward & Co., 38 Delaware av., Phila., Pa.
Boyle, John & Co., 199 Fulton st., N. Y.
Brinckerhoff, Turner & Co., 109 Duane st., N. Y.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
DeGrauw, Aymar & Co., 34 & 35 South st., N. Y.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Fitler, Edwin H. & Co., 23 N. Water st., Phila., Pa.
Frothingham, Baylis & Co., 74 Broad st., N. Y.
Greenwoods Co., New Hartford, Conn.
Hoeper, Wm. E. & Sons, 2d & Frederick sts., Balt., Md.
Martin, Thos., 316 Canal st., N. Y.
McHugh, John F., 1250 B'way, N. Y.
Morris, Richard 166 Front st., N. Y.
Sanderson, John, 117 Duane st., N. Y.
Sheridan, G. K. & Co., 68 Thomas st., N. Y.

Countershafts.

Boston Blower Co., 276 Franklin st., Boston, Mass
Chicago Watch Tool Co., 234 Pine st., Chicago, Ill.
Sturtevant, B. T., 115 Purchase st., Boston, Mass.
Wells Bros. & Co., Greenfield, Mass.

Countersinks.

Billings & Spencer Co. (The), Hartford, Conn.
Chester Mfg. Co., Chester, Conn.
Cleveland Twist Drill Co., 24 & 26 West st., Cleveland, O. **24.**
Johnson, Wm., Newark, N. J.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Conn.
Mayhew, H. H. & Co., Shelbourne Falls, Mass.
Smith, Otis A., Rockfall, Conn.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Syracuse First Drill Co., Syracuse, N. Y.
Wells Bros. & Co., Greenfield, Mass.

Couplers—Car.

Adams & Price, Locomotive & Machine Works, 6 Vauxhall st., Nashville, Tenn.
Aikman Automatic Car Coupler Co., 169 Jefferson av., Detroit, Mich.
Alexander, S. A., York, Pa.
Ames Car Coupling Co., 1430 S. Penn sq., Phila., Pa.
Automatic Car Coupling Co., Rochester, N. Y.
Baldwin Automatic Car Coupler Co., Boston, Mass.
Barnes Automatic Car Coupler Co., Power's Block, Rochester, N. Y.; 25½ N. West st., Syracuse, N. Y.
Boston Automatic Car Coupler Co., 48 Congress st., Boston, Mass.
Browning Car Coupler & Buffer Co., 229 B'way, N. Y.; 4 Wiggins Block, Cincinnati, O.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Consolidated Coupling Co., 45 B'way, N. Y.
Coup, John, 113 Liberty st., N. Y.
Cowell Platform & Coupling Co., 13 Mercantile Bk. Bld., Cleveland, O.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Eureka Car Coupler Co., Grand Rapids, Mich.
Excelsior Life Saving Car Coupler Co., 146 Pearl st., N. Y.
Fennell Automatic Car Coupler Co., Skaneateles, N. Y.
Gravity-Lock Car Coupler Co., Lime Rock, Conn.
Hien Gravity-Lock Car Coupler Co. (The), Lime Rock, Conn.
Hinson Automatic Car Coupler Co., Grand Pacific Hotel, Chicago, Ill.; 113 Liberty st., N. Y.; Des Moines, Iowa.
Jacobs Life Saving Car Coupler Co., 28 Duhl. Blk., Detroit, Mich.
Lorraine Automatic Car Coupler Co., 332 Pine st., St. Louis, Mo.; 93 Nassau st., N. Y.
McConway & Torley, Co., 48th st. & A. V. R. R., Pittsb'gh, Pa.
McKeen Coupler Co., Easton, Pa.
Parsons, J. & F. W., 1430 S. Penn sq., Phila., Pa.
Perry Safety Car Coupling Co., 167 Randolph st., Chicago, Ill.
Sabine, H., Columbus, O.
Sargent, W. W., Fitchburg, Mass.
Sellers & Co., Wm., Phila., Pa.
Sharon Steel Casting Co., Sharon, Pa.
Solid Steel Co., Alliance, O.
Thurmond Car Coupling Co., 802 F st., Wash'n, D. C.
Timms Car Coupler & Journal Box Co., Columbus, O.
United States Automatic Car Coupler Co., Sears Bldg., Boston, Mass.
Van Dorston, A. W., 921 F st., Washington, D C.
Ward Axle, Brake & Coupling Co., Monongahela City, Pa.: 87 Diamond st., Pittsb'gh, Pa.
Williams, Bradbury, 93 Nassau st., N. Y.

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Couplers—Car.—Automatic.

Boston Automatic Car Coupler Co. (The), 33 North st., Boston, Mass.
Consolidated Coupling Co., 45 B'way, N. Y.
Fennell Automatic Car Coupler Co. (Ltd.), Skaneateles, N. Y.
Graveline Automatic Freight Car Coupler Co., 517 Royal Ins. Bldg., Chicago, Ill.
Hinson Automatic Car Coupler Co., Des Moines, Iowa; 113 Liberty st., N. Y.; Grand Pacific Hotel, Chicago, Ill.
McConway & Torley Co., 48th st. & A. V. Ry., Pittsburgh, Pa.
McKeen Coupler Co., Easton, Pa.
Mark's Automatic Car Coupler Co. (The), Benedict Blk., Cleveland, O.
Solid Steel Co. (The), Alliance, O.
U. S. Automatic Car Coupler Co., Sears Bldg., Boston, Mass.
Vance & Le Bean, Cincinnati, O.

Couplers—Freight Car.

Alexander, S. S., York, Pa.
Boston Automatic Car Coupler Co. (The), 33 North st., Boston, Mass.
Cowell Platform & Coupling Co. (The), Cleveland, O.
McConway & Torley Co., Pittsburgh, Pa.

Coupling—Links and Pins.

Ajax Forge Co., Chicago, Ill.
Baugh Steam Forge Co., 1 Newberry & McMillan Bldg., Detroit, Mich.
Birmingham Machine & Foundry Co., Birmingham, Ala.
Buffalo Steam Forge, 24 Hayden Bldg., Buffalo, N. Y.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Cleveland City Forge & Iron Co., Cleveland, O.
Helmbacher Forge & Rolling Mills Co., Barton & DeKalb sts., St. Louis, Mo.
Indianapolis R. R. Link & Pin Co., Indianapolis, Ind.
Logan Iron & Steel Co., 218 S. 4th st., Philadelphia, Pa.
Louisville Steam Forge Co., Louisville, Ky.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Michigan Car Co., Detroit, Mich.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Pittsburgh Forge & Iron Co., 10th st. & Penn av., Pittsb'g, Pa.
Solid Steel Co. (The), Alliance, O
Western Forge & Rolling Mills, 210 N. 3d st., St. Louis, Mo.
West Lebanon Rolling Mill Co. (Ltd.), Lebanon, Pa.

Couplings—Angle.

Brown, A. & F., 43 Park pl., N. Y.

Couplings—Belt.

Crescent Mfg. Co., 3 Michigan st., Cleveland, O.
Silver Lake Co., 83 Chauncey st., Boston, Mass.

Couplings—Chain.

Dixon, Chas. E., 63 19th st., Pittsb'gh, Pa.

Couplings—Cut-off.

Brown, A. & F., 44 Park pl., N. Y.
Cudell, F. E., 294 Superior st., Cleveland, O.
Frisbie, D. & Co., New Haven, Conn.
Hunter, James & Son, North Adams, Mass.
Warner, G. F., Mfg. Co. (The), 212 East st., New Haven, Conn.

Couplings—Rope.

Wellington, H. W., 82 Chauncey st., Boston, Mass.

Couplings—Shaft.

Atwater Mfg. Co. (The), Plantsville, Conn.
Egan Co. (The), Cincinnati, O.
Havens Mfg. Co. (The), Hartford, Conn.
Lombard, Geo. R. & Co., Augusta, Ga.
Savage, J. B., Southington, Conn.
Warner, G. F. Mfg. Co. (The), 212-228 East st., New Haven, Conn.
Wilcox & Howe, Birmingham, Conn.
Wood, Thos. & Co., 22d & Wood sts., Phila., Pa.

Couplings—Steam Hose.

American Fire Hose Mfg. Co., 12 Temple pl., Boston, Mass.
Blue & Fabing, Fremont, O.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Curtis Regulator Co., 63 Beverly st., Boston, Mass. **30.**
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Eaton, Cole & Burnham Co. (The), 82 Fulton st., N. Y.
Eberle, G. S., 32 Hawley st., Boston, Mass.
Eureka Fire Hose Co., 13 Barclay st., N. Y.
Gold, Edw. E. & Co., c. Frankfort and Cliff sts., N. Y.
Goodyear's India Rubber Glove Mfg. Co., 503 B'way, N. Y.
Hickman Hose Coupling Co., 145 Elm st., N. Y.
Moore, Andrew S. & Son, 140 Congress st., Boston, Mass.
Morse, Andrew J., 138 Congress st., Boston, Mass.
Ross, Turner & Co., 189 Devonshire st., Boston, Mass.
Springfield Brass Co. (The), 80 Limestone st., Springfield, O.

Covering. *Pulley

National Pulley Covering Co., Bowly's wharf, Balt., Md.

*Covers—Boat.

McHugh, John F., 1250 Broadway, N. Y.

Crackers—Coal and Lime

Dickson Mfg. Co., Scranton, Pa.
Lancaster, James H., 187 B'way, N. Y. **4.**
Noye, John T. Mfg. Co. (The), Buffalo, N. Y.

Cranes.

Bement, Miles & Co., Callowhill and 21st st., Phila., Pa.; 120 B'way, N. Y.
Benham Hydraulic Water Co., Providence, R. I.
Birmingham Iron Foundry, Birmingham, Conn.
Currier, Cyrus & Sons, Newark, N. J.
Dickson Mfg. Co., Scranton, Pa.
Farrel Foundry & Machine Co., Ansonia, Conn.
Herrick, W., Northampton, Mass.
Industrial Works, Bay City, Mich.
Kimball, C. E., 93 Oliver st., Boston, Mass.
McCoy & Sanders, 26 Warren st., N. Y.
McMyler Mfg. Co., 180 Columbus st., Cleveland, Ohio.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Noye, John T., Mfg. Co. (The), Buffalo, N. Y.
Phœnix Iron Works, Wason st., Cleveland, O.
Poage, John N., Court and Harriet sts., Cincinnati, O. **73.**
Place, Geo., 120 B'way, N. Y. **81.**
Pratt & Whitney Co. (The), Hartford, Conn.
Robinson-Rea Mfg. Co. (The), 134 Water st., Pittsb'gh, Pa.
Sellers, Wm. & Co. (Inc.), 1600 Hamilton st., Phila., Pa.
Southwark Foundry and Machine Co., Wash'n av. and 5th st., Phila., Pa.
Tod, Wm. & Co., Youngstown, O.
Variety Iron Works, Minneapolis, Minn.
Yale & Towne Mfg. Co. (The), 15 N. 6th st., Phila., Pa.; Stamford, Conn.

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Crank Pins.

Dudgeon, Richard, 24 Columbia st., N. Y.
Hussey, Howe & Co. (Ltd.), Pittsb'gh, Pa.; 3 Cliff st., N. Y.
Midvale Steel Co. (The), Nicetown, Phila., Pa.
New Albany Steam Forge Co., New Albany, Ind.
Pedrick & Ayer, 1025 Hamilton st., Philadelphia, Pa. **60.**
Southern Steel Works, John Leighton & Sons, Chattanoogo, Tenn.

Crayons—Metal and Rolling Mill.

Steward, D. M. Mfg. Co. (The), Chattanooga, Tenn. **80.**

Creosote.

Cabot, Samuel, 70 Kilby st., Boston, Mass. **64.**
Carolina Oil & Creosote Co., Wilmington, Del.; **48.**
Eppinger & Russell, 160 Water st., B'klyn, N. Y.
Lehigh Valley Creosoting Co., Perth Amboy, N. J.
Summerville Creosoting Works, Summerville, S. C.
Vanderbilt & Hopkins, 120 Liberty st., N.Y. **65.**

Crockery—R. R. & S. S.

Bassett, Geo. F. & Co., 49 Barclay st., N. Y.
Jeffords, J. E. & Co., 27-38 Salmon st., Phila., Pa. **46.**

*Cross Head Pin Turning Machine.

Pedrick & Ayer, 1025 Hamilton st., Philadelphia, Pa. **60.**

*Cross Heads—Locomotive.

Eureka Cast Steel Co., 307 Walnut st., Phila., Pa.

Crow Bars.

Claffy, John, 48 Dey st., N. Y. **91.**
Dickson Mfg. Co., Scranton, Pa.
Onondaga Steel Works, Sweet's Mfg. Co., Syracuse, N. Y.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
Troy Steel & Iron Co., Troy, N. Y.; 26 Broadway, N. Y.

*Cupola—Furnaces.

Hartsfeld-Furnace Co. (Ltd.) (The), Cincinnati, Ohio. **92.**

Cupola—Hot Blast.

Collian, Victor, 287 Jefferson av., Detroit, Mich. **70.**

Cups and Cans for Oil.

Atwood & McCaffrey, 60 3d av., Pittsb'gh, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Baker, J. W., Corry, Pa.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Bourbon Copper & Brass Works, 196-204 E. Front st., Cincinnati, O.
Cylinder Oil Cup Co., 92 Liberty st., N. Y.
Delaney, H. J. & Co., 126 Claybourn st., Milwaukee, Wis.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Green, W. H., Chester, Pa.
Hall, John S., 66 Cortlandt st., N. Y.
Heft, N. H., Easton, Pa.
Holland & Thompson, Troy, N. Y.
Jenks, James & Co., 48 Randolph st., Detroit, Mich.
Lonergan, J. E. & Co., 211 Race st., Phila., Pa.
McGowan, John H. E., 134 W. 2d st., Cincinnati, O.
McGraw, Henry, 7 Fort E. st., Detroit, Mich.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Nathan Mfg. Co., 92 Liberty st., N. Y.
Newark Lubricator Mfg. Co. (The), 365 Market st., Newark, N. J.
New England Brass Works, 135 Oliver st., Boston, Mass.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
Parke & Lacy, 8 California st., San Francisco, Cal.
Powell, Wm. Co. (The), 50 Plum st., Cincinnati, Ohio.
Read, Edward B., 61 1st st., San Francisco, Cal.
Seibert Cylinder Oil Cup Co., 53 Oliver st., Boston, Mass.; 94 Liberty st., N. Y.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.
Spring Valve Oil Can Co., Cadillac, Mich.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.

Curtains—Berth and Car.

Arnold, Constable & Co., 881 B'way, N. Y.
Goldsmith & Co., 355 E. Water st., Milwaukee, Wis.
Sloane, W. & J., 19th st. & B'way, N. Y.
Solomon's, B. L. Sons, 16th st. & Union sq., N. Y.
Trorlicht, Duncker & Renard, St. Louis, Mo.

Curves—Street R. R.

Andrews, Frank H., 545 W. 33d st., N. Y.
Barrett, Geo, & Co., Camden, N. J.
Craig, Wm. P., 95 Liberty st., N. Y.
Fulton Foundry, Cleveland, O.
Haines Bros., 55 B'way, N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co., 712 Mut. Life Bldg., N. Y.; 6 Oliver st., Boston, Mass.; Bullitt Bldg., Phila., Pa.; Hamilton Bldg., Pittsb'gh, Pa.; Johnson Bldg., Cincinnati, O.; 138 Jackson st., Chicago, Ill.; Bk. of Commerce, St. Louis, Mo.; Cotton Ex., New Orleans, La. **55.**
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Pennsylvania Steel Co., Steelton, Pa. **viii.**
Pugh & Russell, Stewart Bldg., N. Y.
Swead & Bibb, Louisville, Ky.
Way Foundry Co. (The), 23d & Wood st., Phila., Pa.
Wharton, Wm., Jr. & Co., (Inc.), 25th st. & Washington av., Phila., Pa.
White, R. T., 12 Pearl st., Boston, Mass.

Cushions—Boat and Car.

Avery, Frank F., S. Framingham, Mass.
Brown, David, New Haven, Conn.
Clark, E. B., Wabash, Ind.
McHugh, John F., 1250 B'way, N. Y.
Meves, Chas., Quincy, Ill.
Sperry & Co., 83 White st., N. Y.

Cutter Heads.

Battle Creek Machinery Co., Battle Creek, Mich. **17.**
Hosse, A. F., 11 S. Market st., Nashville, Tenn.
Shirmer, Samuel J., Milton, Pa.
Taylor, Stiles & Co., Riegelsville, N. J.

Cutters—Boiler Tube.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**

Cylinder—Boring Machines.

Pedrick & Ayer, 1025 Hamilton st., Phila. Pa. **60.**

Cylinder—Planing Chucks.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**

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Cylinders.

Bass, J. H., Washington & Dearborn sts., Chicago, Ill.
Challenge Wind Mill and Feed Mill Co., Batavia, Ill.
Dickson Mfg. Co., Scranton, Pa.
Granger Fd'y and Machine Co., Providence, R. I.
Healy Iron Works, c. N. 4th & 5th sts., B'klyn, N. Y.
Holcomb & Stone, Mfg. Co., Beloit, Wis.
Meyer, Curt W., 357 4th av., N. Y.
New Doty Mfg. Co., Janesville, Wis.
Sandwich Enterprise Co., Sandwich, Ill.
Sharon Steel Casting Co., Sharon, Pa.
Stowell, O. G., Delavan, Wis.
Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.

Cyclometers.

Butcher Cyclometer Co., 6 Berkeley st., Boston, Mass.
Church, Chas. F., Newark, N. J.
McDonnell Odometor Co., 2 & 4 La Salle st., Chicago, Ill.
Plumb & Webb, Newark, N. J.

Deck Lights.

Gregory, James, Cannon, c. Stanton st., N. Y.
Heidt & Bros., Louis, Boerum and White sts., B'klyn, N. Y.
Mississippi Glass Co., St. Louis, Mo.
Torrey, J. G. & Son, 180 Main st., Rockland, Me.

Decorators—(Interior) Cars, Steamboats, Etc.

Hartwell Co., H. Edgar, 19 W. 22d st., N. Y.; 1416 F st., Wash'n, D. C.
Johnson & Faulkner, 33 E. 17th st., N. Y.
Mosaic Inlay Co., 123 Cedar st., N. Y.

Decorations—(Interior) Wood.

Gardner, Holmes & Co., 330 E. 61st st., N. Y.
Lamb, J. & R., 59 Carmine st., N. Y.
Wheeler, W. E., 96 Erie st., Toledo, O.
Royston & Co., W. H., Corona, N. Y.

Depot Seating.

Andrews, A. H., 195 Wabash av., Chicago, Ill.
Frost & Peterson, 161 W. 18th st., N. Y.
Rushville School Furniture Co., Rushville, Ind.
Sinclair, F. A., Mottville, N. Y. **41.**

Derricks—Steam.

American Mfg. Co., 63 S. Robert st., St. Paul, Minn.
Beatty & Sons, M., Welland, Ont.
Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Burke, P. F., 360 Dorchester av., Boston, Mass.
Carpenter, Geo. B. & Co., 202 to 206 S. Water st., Chicago, Ill. **31.**
Claffy, John, 48 Dey st., N. Y. **91.**
Excelsior Iron Works Co., Columbus st., Cleveland, O.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
McMyler Mfg. Co., 180 Columbus st., Cleveland, Ohio.
Osgood Dredge Co., Albany, N. Y.
Phœnix Iron Works, Cleveland, O.
Pound Mfg. Co., Lockport, N. Y.
Variety Iron Works, Minneapolis, Minn.
Vulcan Iron Works Co., Oswego, N. Y.

Designers—Engraving.

Ames, W. G., 276 Washington st., Boston, Mass.
Androus, G. L., 265 6th av., N. Y.
Cleveland Engraving Co., 208 Superior st., Cleveland, O.
Display Advt. Co., 26 Church st., N. Y.
Frey Printing Co. (The), 11-13 E. 8th st., Cincinnati, O.
Longacre & Co., 706 Chestnut st., Phila., Pa.
Moss Engraving Co., 535 Pearl st., N. Y. **62.**
Reilly, Chas. F., S. W. c. 5th & Main sts., Louisville, Ky.
Stevens, John Calvin, 57 Exchange st., Portland, Me.
The H. Edgar Hartwell Co., 19 W. 22d st. and 28 School st., Boston, Mass.
Van Leyen & Co., Detroit, Mich. **66.**

*Desks—Railroad Office.

Kane, Thomas & Co., 139 Wabash av., Chicago, Ill. **28 & 29.**

Dies and Die Stocks.

Burke, P. F., 360 Dorchester av., Boston, Mass.
Crosby, G. A. & Co., 261 Randolph st., Chicago, Ill.
Ferracute Machine Co., Bridgeton, N. J. **15.**
Forbes & Curtis, Bridgeport, Conn.
Theberath, Chas. M., 10 Ward st., Newark, N. J. **56.**

Disinfectants.

Baltimore Coal Tar & Mfg. Co., 16 W. Camden st. Balt., Md.

Ditchers.

Maywood Co., Maywood, Ill.
New Era Mfg. Co., 625-631 S. Halsted st., Chicago, Ill.
Stacy, Wm., Iowa Falls, Iowa.
Western Wheel Scraper Co., Mt. Pleasant, Ia.

Divers and Diving Apparatus.

Bostwick, James, 120 Woodbridge st. W., Detroit, Mich.
Dwyer, H. F., 14 Locust st., Detroit, Mich.
Goodyear's India Rubber Glove Mfg. Co., 503 B'way, N. Y.
Grummond, S. B., Dock, bet. 1st and Cass sts., Detroit, Mich.
Lowe, S. R., 361 Pleasant av., N. Y.
Lowe, E. R., 2 Coentis sl., N. Y.
Morse, Andrew, J., 138 Congress st., Boston, Mass.
Schraeder, A. & Son, 32 Rose st., N. Y.
Thacher & Breymann, Kings Block, Toledo, O.
Townsend, Geo. W., 212 Atlantic av., Boston, Mass.
Quinn, J. E., 15 Atwater st., Detroit, Mich.

Door Fasteners for Cars.

Appleton Novelty Works, Appleton, Wis.
Dayton Malleable Iron Co., Dayton, O.
Haycox, W. E., 1158 Euclid av., Cleveland, O.
Hoke Car Door Fastener Co., Chambersburg, Pa.
Johnson, Walter & Co., Detroit, Mich.

Door Hasps for Cars.

Buffalo Seal & Press Co., 430 Niagara st., Buffalo, N. Y.

Door Stops.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. & Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Haycox Door Fastener Co., 1158 Euclid av., Cleveland, O.
Miller, Chas. B., 310 E. 14th st., N. Y.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.

Doors—Boiler.

Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.

Doors—Car.

Drake & Weir, Cleveland, O.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Sheffield Velocipede Car Co., Three Rivers, Mich.
Wagner Car Door Co., Indianapolis, Ind.

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Doors—Freight Car.

Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Moore Mfg. Co., 165 Lake st., Chicago, Ill.
Wagner Door Car Co., Indianapolis, Ind.

Doors—Furnace.

Ashcroft Mfg. Co., 111 Liberty st., N. Y.
Chambers & Macbeth, Cleveland, O.

Doors—Grain Car.

Long & Harris, 140 Washington st., Chicago, Ill.
Sheffield Velocipede Car Co., Three Rivers, Mich.

Doors—Stock Car.

Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**

Doors and Shutters—Iron.

Berlin Iron Bridge Co. (The), East Berlin, Conn.
Chicago Wrought Iron Works, 207 S. Canal st., Chicago, Ill.
Cincinnati Corrugating Co., Eggleston av., n. 6th st., Cincinnati, O.
Clark, Bunnett & Co. (Ltd.), 162-164 W. 27th st., N. Y.
Cushing, Daniel & Co., 218 Middlesex st., Lowell, Mass.
Gallagher, D. F. & Co., 223 Commercial st., Boston, Mass.
Gobrecht, William, Pearl, c. Plum st., Cincinnati, O.
Noelke, Frederick, 212 to 224 S. Pennsylvania st, Indianapolis, Ind.
Schreiber, A. E. & Co., 140 N. Desplaines st., Chicago, Ill.,
Tower, J. H., 48-52 Borden st , Providence, R. I.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, Ohio.

Doubletrees.

McCormick, Courtad & Co., Sandusky, O.

Drain Tile.

Brockett, C. A., 800 Delaware st., Kansas City, Mo. **69.**

Draperies—Railway & S. S.

Arnold, Constable & Co., 881 B'way, N. Y.
Goldsmith & Co., 355 E. Water st., Milwaukee, Wis.
Solomon's, B. L., Sons, 16th st. and Union sq., N. Y.
Sloane, W. & J., 19th st. & B'way, N. Y.
Trorlicht, Duncker & Renard, St. Louis, Mo.

Draw Bars.

Andrews, Frank H., 545 W. 33d st., N. Y.
Baugh Steam Forge Co., Detroit, Mich.
Dayton Malleable Iron Co., Dayton, Ohio.
Louisville Steam Forge Co., Louisville, Ky.
Pittsburgh Forge & Iron Co., 10th st., n. Penn av., Pittsb'g, Pa.
Safford, J. B., Buffalo, N. Y.
Solid Steel Co., Alliance, O.

Draw Heads.

Brill, J. G. Co., Philadelphia, Pa.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Western Forge & Rolling Mills, 210 N. 3d st , St. Louis, Mo.

Draw Head Plates—Improved.

Mueller, Chas. L., Barnesville, Minn.

Dredging Machines.

Atlas Dredging Co., 123 Front st., N. Y.
Anderson & Barr, 240 11th st., Jersey City, N. J.
Beatty, M. & Sons, Welland, Ont.
Benton, Thos. H., 44 B'way, N. Y.
Brainard Bros., 24 State st., N. Y.
Robinson, A. Wells, 1343 Arch st., Phila., Pa.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Cushing, N. B., ft. Morris st., Jersey City, N. J.
Copeland & Bacon, 85 Liberty st., N. Y.
Deep Sea Hydraulic Dredging Co., 24 State st., N. Y.
Dubois, Henry, Sons, 119 South st., N. Y. **19.**
Hayes, John J., Kent & West, Greenpoint, L. I. N. Y.
Haywood, John H., 11 Pine st., N. Y.
Knott, Kennard, 234 S. Jefferson st., Chicago, Ill.
Marion Steam Shovel Co., Marion, O.
Monongahela Dredging Co., 605 Smithfield, st., Pittsb'g, Pa.
Morris & Cummings Dredging Co., 45 Duane st., N. Y.
New England Machine Co., 29-33 Haverhill st., Boston, Mass
Osgood Dredge Co., 37 State st., Albany, N. Y.; Potter Building, N. Y.
Pidgeon, Frank, 60 South st., N. Y.
Poole & Hunt, 7 German st., Balt., Md.
Portland Co., Portland, Me.
Pound Mfg. Co., Lockport, N. Y.
Tebo, Wm. M., 23 South st., N. Y.
Union Dredging Co., 34 Pine st., N. Y.
Vulcan Iron Works, 86 N. Clinton st., Chicago, Ill.
Vulcan Iron Works, Toledo, O.

Dredging Contractors.

American Dredging Co., Camden, N. J.; 234 Walnut st., Phila., Pa.
Atlas Dredging Co., 13 Fulton st., N. Y.
Atlantic Dredging Co., 361 Front st., B'klyn, N. Y.
Baltimore Dredging Co. (The), 140 Block st., Balt., Md.
Barker, C. S., Sault de St Marie, Mich.
Bay State Dredging Co. (The), 76 High st., Boston, Mass.
Brainard Bros., 24 State st., Cheeseborough Bldg, N. Y.
Bucyrus Foundry and Mfg. Co., Bucyrus, O.
Calumet & Chicago Canal & Dock Co., 170 Dearborn st., Chicago, Ill.
Canton Dredging Co., 112 S. Gay st., Balt., Md.
Champion Excavating Apparatus, New Orleans, La.
Chicago Dredging & Dock Co., 219 S. Water st., Chicago, Ill.
Coal Transfer & Dredging Co., Cincinnati, O.
Dubois', Henry, Sons, 119 South st., N. Y. **19.**
Dupuis, A. J., 15 Atwater st., W., Detroit, Mich.
Eastern Dredging Co., 212 Atlantic av , Boston, Mass.
Flannery, W., 60 South st., N. Y.
Fobes, G. C. & Co , Mobile, Ala.
Frank Pidgeon Dredging Co. (The), 60 South st., N. Y.
Green's Dredging Co., 178 S. Water st., Chicago, Ill.
Hartford Dredging Co. (The), 203 State st., Hartford, Conn.
Hayward, J. H., 11 Pine st., N. Y.
Hayes, John J., Kent, c. West st., B'klyn, N. Y.
Hubbell, T. M., Saginaw City, Mich
Lancaster, James H., 187 B'way, N. Y. **4.**
Morris & Cummings, Dredging Co., 45 Duane st., N. Y.
Monks, John & Son, 130 Water st., N. Y.
National Dredging Co., Wilmington, Del.
N. E. Dredging Co., 12 Post Office sq , Boston, Mass.
Osgood Dredge Co., 37 State st., Albany, N. Y.
Pacific Coast Dredging and Reclamation Co., 271 East st., San Francisco, Cal.
Ross & Sanford, Jersey City, N. J.; 21 S. Gay st., Balt., Md.
Souther, John & Co., 12 Post Office sq , Boston, Mass.
Taylor Wilsey & Taylor, Jersey City, N. J.
Tebo, W. M., 23 South st., N. Y.
Toledo Dredging Co., Toledo, O.

The numbers following names indicate page on which the firm advertises.

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Townsend Furnace & Machine Shop (Builders), B'way, c. Rensselaer st., Albany, N. Y.
Union Dredging Co., 34 Pine st., Syracuse, N. Y.
Vulcan Iron Works, 86 N. Clinton st., Chicago, Ill.
Vulcan Iron Works Co., Oswego, N. Y.
White, I. E., 28 Coenties sl., N. Y.
Woolley, C. & Co., 192 Commercial st., Boston, Mass.

Drills—Coal.

Lancaster, James H., 187 B'way, N. Y. **4.**

Drilling Machines and Machinery.

Adams, A. L., Cedar Rapids, Iowa.
Adt, John & Son, State st., c. Mills River, New Haven, Conn.
American Mfg. & Supply Co., 12 Dey st., N. Y.
Amidon & White, Buffalo, N. Y.
Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Bartholomew, H. S., Bristol, Conn.
Barnes, W. F. & John Co., 571 Ruby st., Rockford, Ill. **49.**
Bement, Miles & Co., Callowhll & 21st st., Phila., Pa.; 120 B'way, N. Y.
Betts Machine Co., Wilmington, Del.
Bickford, H., c. Pike & Front sts., Cincinnati, O.
Billings & Spencer Co. (The), Hartford, Conn.
Bittenbender & Ashton, Plymouth, Pa.
Blaisdell, P. & Co., Worcester, Mass.
Boynton & Plummer, 52 La Grange st., Worcester, Mass.
Burleigh Rock Drill Co., Fitchburg, Mass.
Bullock, M. C. Mfg. Co., 138 Jackson st., Chicago, Ill. **10 & 11.**
Burnham, Geo. & Co., Hermon st., Worcester, Mass.
Burleigh Rock Drill Co., Fitchburg, Mass.
Butterfield & Co., Derby Line, Vt.
Champion Blower & Forge Co., Lancaster, Pa.
Cincinnati Tool Co. (The), Cincinnati, O.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
Currier & Snyder, Worcester, Mass.
Dallett, Thomas H. & Co., 13th and Buttonwood sts., Phila., Pa.
Diamond Prospecting Co., 22 W. Lake st., Chicago, Ill.
Dickson Mfg. Co., Scranton, Pa.
Donegan & Swift, 174 Fulton st., N. Y.
Dransfield, Thomas, Rochester, N. Y.
Dwight Slate Machine Co., Hartford, Conn.
Edwards, M. L., Mfg. Co. (The), Salem, O.
Empire Drill Co., 10 Swan st., Balt., Md.
Enterprise Machine Co., 423 4th st., S. Minneapolis, Minn.
Energy Mfg. Co., 115 S. 15th st., Phila., Pa. **57.**
Evans, A. C., Mfg. Co., Springfield, O
F. F. Waters Mfg. Co., 38 Oliver st., Boston, Mass.
Fitchburg Machine Works, Fitchburg, Mass.
Forbes & Curtis, 98 John st., Bridgeport, Conn.
Gallagher Mfg. Co., Lynn, Mass.
Garvin, E. E. & Co., 139-143 Centre st., N. Y.
Genesee Valley Mfg. Co., Mt. Morris, N. Y.
Gillespie Tool Co., 21st and Railroad sts., Pittsburgh, Pa.
Gould & Eberhardt, Newark, N. J.
Gundlach, P. M., Belleville, Ill.
Henderer, Edmond, Wilmington, Del.
Herrick & Cowell, New Haven, Conn.
Hill, Clark & Co., 156 Oliver st., Boston, Mass.
Howell's Mining Drill Co., Plymouth, Pa.
Illinois Iron and Bolt Co., Carpentersville, Ill.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Johnson, E. E., Worcester, Mass.
Johnson, Warren P., Oskaloosa, Ia.
Jones and Lamson Machine Co., Windsor, Vt.
Keystone Driller Co., Fallston, Pa.
Lancaster, James H., 187 B'way, N. Y. **4.**
Lechner Mfg. Co. (The), Columbus, O.
Lowell Wrench Co., 19 Church st., Worcester, Mass.
McCoy & Sanders, 26 Warren st., N. Y.
Manneer Drill Mfg. Co., Rochester, N. Y.
Madison Mfg. Co., Madison, Wis.
Merritt, E. & Co., Montello, c. Church st., Brockton, Mass.
Miller's Falls Co., 93 Reade st., N. Y.
Miller & Durst, Newton Falls, O.
Morse Twist Drill and Machine Co., New Bedford, Mass.
National Drill and Compressor Co., 57 Elm st., N. Y.
Niles Tool Works, Hamilton, O.
Norris & Bro., Rushville, Ind.
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Parke & Lacy, 8 California st., San Francisco, Cal.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Peck, Stow & Wilcox Co., Southington, Conn.
Pennsylvania Diamond Drill Co., Birdsboro, Pa.
Place, George, 120 B'way, N. Y. **81.**
Post & Co., 154 Lake st., Chicago, Ill.
Prentice Bros., Worcester, Mass.
Reed, F. E., 120-124 Gold st., Worcester, Mass.
Rosback, Fred. P., 224 E. Washington st., Chicago, Ill.
Rosencrans, W. A., Scranton, Pa.
St Louis Vise & Artesian Well Tool Co., 1430 N. 10th st., St. Louis, Mo.
Sibley & Ware, South Bend, Ind.
Sigourney Tool Co., Hartford, Conn.
Simpson, J. S. & G. F., 26-36 Rodney st., B'klyn, N. Y.
Slate, Dwight, Hartford, Conn.
Smith & Egge Mfg. Co. (The), Lafayette, c. Allen sts., Bridgeport, Conn.
Smith, Seymour & Son, Oakville, Conn.
Standard Tool Co., Cleveland, O. **49.**
Star Tool Co. (The), Beverly, c. Mason st., Providence, R. I.
Stearns, E. C. & Co., Syracuse, N. Y.; 51 John st., N. Y.
Stoddard Mfg. Co. (The), Dayton, O.
Stow Flexible Shaft Co. (Ltd.), 2224 Penn av., Phila., Pa. **26.**
Sullivan Machine Co., Claremont, N. H.
Taft, Geo. C, 34 Southbridge st., Worcester, Mass.
Tallman & McFadden, Phila., Pa.
Universal Radical Drill Co. (The), 8th & Sycamore st., Cincinnati, O.
Waters, W. L. & Sons, Nashville, Tenn.
Waters Mfg. Co., 266 Washington st., Boston, Mass.
Wells Bros. & Co., Greenfield, Mass.
Whitcomb, Geo. D., Chicago, Ill.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Woodsum Machine Co. (The), Dayton, O.
York, S. M., 44 S. Water st., Cleveland, O.

Drills—Diamond Pointed Rock.

Bullock, M. C. Mfg. Co., 138 E. Jackson st. (Room 510), Chicago, Ill. **10 & 11.**
Hartsfeld Furnace Co., Cincinnati, O. **92.**
Hussey, Howe & Co., Pittsburgh, Pa.
Jeffrey Mfg. Co., Columbus, O.
Severance, A. J., 320 Sansome st., San Francisco, Cal.
Simpson & Watkins, Scranton, Pa.
Sullivan Machine Co., Claremont, N. H.

Dry Docks.

Abrahams Bros., 7 Cortlandt st., Balt., Md.
Ajax Heaving Down Hulk Asso., 28 California st, San Francisco, Cal.
Atlantic Dock Co., 1 N. Pier, Brooklyn, N. Y.
Anglo-American, Elizabeth, near Dwight st., B'klyn, N. Y.
Anglo-Am. Dry Dock & Warehouse Co., 35 B'way, N. Y.
Baltimore Dry Dock Co., 403 2d st., Balt, Md.
Bay City Dry Dock & Ship Yard Co., Bay City, Mich.
Barr, W., 136 Water st., Pittsburgh, Pa.
Birmingham Dock Co., ft. S. 20th st., Pittsburgh, Pa.

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Borchers, G. H., Loramies, O.
Brooklyn Water Front. ft. 27th st., B'klyn, N. Y.
Brooklyn Water Front Warehouse & Dry Dock Co., 27 Coentis sl., N. Y.
Burtis, D., Jr., 268 Conover st., B'klyn, N. Y.; 23 South st., N. Y.
California Dry Dock Co., 318 California st., San Francisco, Cal.
Camden Dry Docks, 138 Walnut st., Phila., Pa.
Church & Swain, 73 Water st., Pittsburgh, Pa.
Clark Dry Dock Co., River rd., ft. Clark av., Detroit, Mich.
Cleveland Dry Dock Co., 95 Elm st., Cleveland, Ohio.
Columbia Iron Works & Dry Dock Co., Locust Pt., Balt., Md.
Cramps, W. Sons, ft. Elizabeth st., B'klyn, N. Y.
Cramp, W. & Sons, Beach, ft. Palmer st., Phila., Pa.
Crawford, Augustus, ft. Chesapeake st., Balt., Md.
Cushing, N. B., ft. Morris st., Jersey City. N. J.
Detroit Dry Dock Co., Atwater, c. Orleans st., Detroit, Mich.
Dimmers & Baker, ft. Charles st., Buffalo, N. Y.
Downing & Lawrence, 28 Coentles sl., N. Y.
Dunford & Alverson, Port Huron, Mich.
Durm & Roberts, ft. Light st., Balt., Md.
Dyer, D. W., Belfast, Me.
East Boston Dry Dock Co., 96 Border st., Boston, Mass.
Empire Transportation Co., Water, c. Bridge st., New Haven, Conn.
Erie Basin, ft. Elizabeth st., B'klyn, N. Y.
Foster, J. W., Akron, O.
Frazier, S. A. & Co., Ashland, Ky.
Gilmore & Son, Toledo, O.
Good Intent Dry Dock, ft. Delaroude st., 5th Dist., New Orleans, La.
Goble & McFarlane, Oswego, N. Y.
Green, W. F. & Son, 274 Border st., Boston, Mass.
Handren & Robins, 126 Washington st., N. Y.
Hilton, W. B., 241 South st., N. Y.
International Coffer Dam Co. (Ltd.), 78 Broad st., N. Y.
International, ft. 40th st., B'klyn, N. Y.
Jenkins & Tregarthen, Pier 52 E. R., N. Y.
Jones & Whitmill, Jersey City, N. J.
Kelly, J. W., ft. 20th st., B'klyn, N. Y.
McKeever & Dingwall, Jersey City, N. J.
McKeesport Dry Dock, 141½ Water st., Pittsb'g, Pa.
McLellan Dock Co., 159 Common st., New Orleans, La.
McCarthy, J. & Bro., Jersey City, N. J.
McWilliams, C. & D., Jersey City, N. J.
Marine Railway & Dry Dock Co., 371 Eastern av., Cincinnati, O.
Marine Dry Dock & Shipyard Co., 48 Carondelet st., New Orleans, La.
Mechanics' Dry Dock Co., Grand Rapids, Mich.
Merchants' Dry Dock Co., 318 California st., San Francisco, Cal.
Merchants' Marine Railway Co., Belfast, Me.; Portland, Me.
Middleport Docks, Middleport, O.
Mills, Robert & Co., acr. Creek, ft. Chicago st., Buffalo, N. Y.
Monk, J. E., Sandusky, O.
Murphy, W., ft. Baker st. Buffalo, N. Y.
New England Ship Bldg. Co., Bath, Me.
N. Y. Balance Dock Co., 3 Broad st., N. Y.
N. Y. Floating Dry Dock Co., Piers 42, 48-49 E. R., N. Y.
North's Ways, ft. Louisiana st. and Potrero Point, San Francisco, Cal.
North Marine Railway Co., Rockland, Me.
Notter G. H., ft. Virginia st., Buffalo, N. Y.
Payne, C. H., Akron, O.
Provincial Dry Dock Co., 66 New st., N. Y.
Portland Dry Dock, Portland, Me.
Potrero Marine Railway, Suira N. Pacific Rolling Mills, San Francisco, Cal.
Reed & Kreps, ft. Mulberry st., Alleghany, Pa.
Riley Bros., 126 Perry st., Buffalo, N. Y.
St. Louis Sectional Dock Co., ft. Lesperance st., St. Louis, Mo.
Scott & Nesbit, Oswego, N. Y.
Screw Dock Co., Piers 39-40 E. R., N. Y.
Simpson & Bro., Christian st. whf., Del., Phila., Pa.
Simpson, J. E. & Co., 35 B'way, N. Y.
Simpson's Patent Dry Dock Co., 60 Commercial st., Boston, Mass.
Smith, L. P., Whiskey Island, Cleveland, O.
South San Francisco Dock Co., 320 Sansome st., San Francisco, Cal.
South Marine Railway, Rockland, Me.
Stetsen, E. & I. K., Bangor, Me.
Stoutz & Co., Mobile, Ala.
Teho, Wm. M., 23 South st., N. Y.
Townsend, G. S., ft. 20th st., B'klyn.
Union Dry Dock Co., Acr Creek, ft. Chicago st., Buffalo, N. Y.
Vallette Dry Dock, Patterson, c. Vallette st., New Orleans, La.
Watts Marine R'y, Dennik, c. Osage st., San Francisco, Cal.
Wolverine Dry Dock Co., Port Huron, Mich.
Woodall, W. E & Co., ft. Allen st., Balt., Md.
Wood's Sectional Dry Dock Co., 25 Camp st., New Orleans, La.
Wright, W. A. & Son, Ferry, c. Meadow st., New Haven, Conn.

Drying Apparatus.

Boston Blower Co., 276 Franklin st., Boston, Mass.

Duplicate Letters Written.

Addressing, Duplicating & Mailing Co., 49 Dey st., N. Y. **68.**
Doane, F. V. & Co., 68 University pl., N. Y. **87.**

Dust Guards.

Allington & Curtis Dust Separator Co., East Saginaw, Mich.
Backus Co., Detroit, Mich.
Baker Adjustable Bearing Co., 35 Wall st., N. Y.
Baker, W. S. G., Fulton Station, Balt., Md.
Fabian, J. Roberts Mfg. Co., Detroit Mich.
Johns, H. W. Mfg. Co., 87 Maiden la., N. Y.
Roberts, Fabian J. Mfg. Co., 967 Michigan av., Detroit, Mich.
Vulcanized Fibre Co., 14 Dey st., N. Y. **96.**

Dynamite.

Ætna Powder Co., 98 Lake st., Chicago, Ill. **8.**
Am. Mfg. & Supply Co., 12 Dey st., N. Y.
Atlantic Dynamite Co. (The), 245 B'way, N. Y.; 3 Smithfield st., Pittsburgh, Pa.
Atlantic Dynamite Co., 139 Dearborn st. (Room 15), Chicago, Ill.
Dittman Powder Works, 1542 Madison av., N. Y.
Dixie Powder Co., Chattanooga, Tenn.
Great Western Powder Co., Toledo, O.
Hecla Powder Co. (The), 239 B'way, N. Y.
Hercules Powder Co., 40 Prospect st., Cleveland, O. **22.**
James C. E. & Co., Chattanooga, Tenn.
Kirk, Arthur & Son, 910 Duquesne Way, Pittsburgh, Pa.
Laflin & Rand, 29 Murray st., N. Y.
Philips & Wiggs Machinery Co., Birmingham, Ala.
Repanno Chemical Co. (The), 237 B'way, N. Y.
Rendrock Powder Co., 23 Park pl., N. Y. **1.**
Wiggs & Bacon Co. (The), Birmingham, Ala.

Dynamometers.

Lawrence Machine Co., Mason Bldg., Boston, Mass.
Shaw, Thos., 915 Ridge av., Phila., Pa.

Dynamos.

Arnoux & Hochhausen Electric Co., 48 Pearl st., N. Y.
Brush Electric Co., Belden st., Cleveland, O.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.

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Clafien Mfg. Co., 71-73 Ontario st., Cleveland, O.
Cook, Asa S., Hartford, Conn.
Eddy Electric Mfg. Co., Hartford, Conn.
Electro Dynamic Co., 224 Carter st., Phila., Pa.
Electric Construction Co., cor. Washington and York sts., B'klyn, N. Y.
Excelsior Electric Co., 9 Dey st., N. Y.
Fort Wayne Jenney Electric Light Co., Fort Wayne, Ind.; Mexico City, Mex.; 26 N. 7th st., Phila., Pa.; 225 Dearborn st., Chicago, Ill.
Grand Rapids Electric Light & Powder Co., Grand Rapids, Mich.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Hanson, Van Winkle & Co., Newark, N. J.
Heisler Electric Light Co., 809 S. 7th st., St. Louis, Mo.
Jenney Electric Co., Indianapolis, Ind.
Kimball & Davis, 160 Portland st., Boston, Mass.
Mutual Electric Mfg. Co., 20 Nassau st., N. Y.
N. Y. Electric Const. Co., 242 E. 122d st., N. Y.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
Novelty Machine Works, Wellsville, O.
Schaefer Electric Mfg. Co., Boston, Mass.
Schuyler Electric Light Co., Hartford, Conn.
Schuyler Electric Co., Middletown, Conn.
Sawyer-Man Electric Co., 32 Nassau st., N. Y.
Thomson-Houston Electric Co., 178 Devonshire st., Boston, Mass.
Tremont Electric Lighting Co., Congress & A sts., Boston, Mass.
Union Electric Co., 123 N. 2d st., Phila., Pa.
U. S. Electric Lighting Co., 120 B'way, N. Y.; 216 La Salle st., Chicago, Ill.
Waterhouse Electric Mfg. Co., Hartford, Conn.
Weston, Edward, 645 High st., Newark, N. J.
Zucker & Levett Chemical Co., 538 W. 16th st., N. Y.

Eccentric Mandrels.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**

Ejectors for Discharging Water.

Aller, A., 109 Liberty st., N. Y.
Hall's Engineering Co., 112 John st., N. Y.
Nathan Mfg. Co., 94 Liberty st., N. Y.
Van Duzen & Tift, 102-104 E. 2d st., Cincinnati, Ohio. **57.**

Electrical Goods and Instruments for House Furnishing, Steamships, Depots, Etc.

Allen, George, G., 191 La Salle st. (Room 33), Chicago, Ill.
Altman & Co., 114 Dearborn st., Chicago, Ill.
American Electric Mfg. Co., 314 Dearborn st., Chicago, Ill.
Applegate Electric Floor Mat Mfg. Co., 35 Market st., Camden, N. J.
Atkinson, Philip, 168 E. Randolph st. (Room 19), Chicago, Ill.
Bain, Foree, 95 E. Indiana st., Chicago, Ill.
Boettger, Gustav, Milwaukee, Wis.
Bogart, A. L., 22 Union sq. E., N. Y.
Brush Electric Co., 130 E. Washington st., Chicago, Ill.
Central Electric Co., 40 La Salle st., Chicago, Ill.
Chicago Electric Co., 88 S. Market st. (Room 1), Chicago, Ill.
Chicago National Electric Co., 152 La Salle st. (Room 13), Chicago, Ill.
Corbin, P. & F., New Britain, Conn.
Cowl & Van Denburg, 40 W. Quincy st., Chicago, Ill.
Darche, Geo. C., 35 S. Clarke st., Chicago, Ill.
Dibolo Burglar Alarm Co., 177 La Salle st., Chicago, Ill.
Electric Gas Lighting Co., 35 Arch st., Boston, Mass.
Electrical Supply Co. (The), 171 E. Randolph st., Chicago, Ill.
Excelsior Electric Co., 139 E. Madison st., Chicago, Ill.
Franklin Electric Co., 82 S. Market st. (Room 24), Chicago, Ill.
Gamewell Fire Alarm Telegraph Co., 118 La Salle st. (Room 65), Chicago, Ill.
Haggerty, Geo. A., 803 3d av., N. Y.
Harbert, Edw. E. & Co., 159 La Salle st., Chicago, Ill.
Hazazer & Stanley, 34 Frankfort st., N. Y.
Heylmann, Chas. J., 298 W. Lake st., Chicago, Ill.
Holmes, Booth & Hayden, 185 Dearborn st. (Room 10), Chicago, Ill.
Johnson, Holland & Co., 227 La Salle st., Chicago, Ill.
Jones, C. E. & Bro., Cincinnati, O. **78.**
Kanze, Robt., 90 E. 9th st., N. Y.
Loff & Stoelting, 13 S. Canal st., Chicago, Ill.
McIntosh, Galvanic & Faradic Battery Co., 300-302 Dearborn st., Chicago, Ill.
Meyer, Curt W., 357 4th av., N. Y.
Midland Electric Co., Omaha, Neb.
Ostrander, W. R. & Co., 23 Ann st., N. Y.
Pearce & Jones, 79 John st., N. Y.
Railway Telegraph Supply Co., 213 E. Randolph st., Chicago, Ill.
Raymond, W. C., 411 Ridge av., Chicago Ill.
Sanden Electric Co., 169 La Salle st., Chicago, Ill.
Scott, L. B. & Co., 4148 Cottage Grove av., Chicago, Ill
Standard Electrical Works, Cincinnati, O.
Tripp, C. W. & Co., 112 E. Monroe st., Chicago, Ill.
Van Depole Electric Mfg. Co., 21 N. Clinton st., Chicago, Ill.
Vanstone Mfg. Co., Providence, R. I.
Vladuct Mfg. Co., Charles & German sts., Balt., Md.
Western Electric Co., 227 S. Clinton st., Chicago, Ill.
Winter, Julius A., 68 W. Randolph st., Chicago, Ill.
Wollensak, J. F., 225 E. Lake st., Chicago, Ill.
Zucker & Levett Chemical Co., 36 11th av., N. Y.

Electric Battery Jars.

Fibrite Mfg. Co., Portland, Me.

Electric Car-Trucks and Gear.

Bemis Car Box Co., Springfield, Mass.
Bentley-Knight Electric Railway Co., 115 B'way, N. Y.
Chadbourne & Hastings, Forest Bldg., Phila., Pa.
Daft Electric Light Co. (The), 115 B'way, N. Y.
Detroit Electrical Works, 79 Woodbridge st., Detroit, Mich.
Electric Railway Company, Pittsb'g, Pa.
Dunham, Sumner T., 45 B'way, N. Y.
Meigs Elevated Ry. Construction Co., 225 Bridge st., E. Cambridge, Mass.
Overhead Conductor Electric Railway Co., Pittsburgh, Pa.
Riley Ry. Construction Co. (The), Bloomfield, N. J.
Safety Electric Construction Co., 41 Wall st., N. Y.
Safety Electric Railway & Power Co., 41 Wall st., N. Y.
Sprague Electric Railway & Motor Co., 16 Broad st., N. Y.; 55 Oliver st., Boston, Mass.
Thomson-Houston Electric Co. (The), 115 B'way, N. Y.
Union Bridge Co., 1 B'way, N. Y.
Van Depolle Electric Mfg. Co., Chicago, Ill.

Electric Gas Lighting Appliances.

C. B. Arsino Electrical Co., 5 E. Court st., Springfield, Mass.
Bogart, Abraham, L., 22 Union sq., N. Y.
Boston Electric Co., 548 Wash'n st., Boston, Mass.
Buck, W. J., Son & Co., 407 N. 8th st., Phila., Pa.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Central Electric Co., 88 La Salle st., Chicago, Ill.
Derby, L. A. & Co., 10 Prescott st., Lowell, Mass.
Detroit Electrical Works, 7th & Woodbridge sts., Detroit, Mich.
Electric Gas Light Co., 26 N. 7th st., Phila., Pa.; 35 Arch st., Boston, Mass.
Foster Lighting Co., 120 Broadway, N. Y.
Fuller, Foltzer & Co., 27 Arch st., Boston, Mass.
Greeley & Co. E. S. (The), 7 Dey st., N. Y.
Hinds, Chas. H., 418 W. 27th st., N. Y.
Ketcham, J. M. & Co., 76 W. 125th st., N. Y.
Lyman, A. B., 36 S. Water st., Cleveland, O.
Marr, Frank S., Bissell Block, Pittsb'gh, Pa.
Meyer, Curt W., 357 4th av., N. Y.
Midland Electric Co., 1213 Harney st., Omaha, Neb.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
Pearce & Jones, 79 John st., N. Y.
Pintsch Lighting Co. (The), 45 B'way, N. Y.
Providence Electric Supply Co., 50 Washington st., Providence, R. I.
Rosseau's Electrical Works, R. R. av., S. W. 138th st., N. Y.
Shaw & Geary, 53 n. 7th st., Phila., Pa.
Smith, A. T., 6 W. 14th st., N. Y.
Standard Electrical Works, Cincinnati, O.

Electric Lamps.

Brush Electric Co., Belden st., Cleveland, O.
Buck, M. M. & Co., 209 & 211 N. 3d st., St. Louis, Mo.
Buffalo Electric Works, Buffalo, N. Y.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Colburn, I. W. & Co., Fitchburg, Mass.
Duffus, Geo. W. & Co., 233 31st st., Chicago, Ill.
Edison United Mfg. Co., 65 5th av., N. Y.
Electric Construction & Supply Co., 87 Liberty st., N. Y.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.
Electro Dynamic Co. of Philadelphia, 224 Carter st., Phila., Pa.
Fort Wayne Jenney Electric Light Co., Fort Wayne, Ind.
Gleason, E. P. Mfg. Co., 181 Mercer st., N. Y.
Grand Rapids Electric Light & Power Co., Grand Rapids, Mich.
Greeley & Co. E. S., 7 Dey st., N. Y.
Hammer, Riedel & Co., Allegheny, Pa.
Hill, W. S., 21 Stanhope st., Boston, Mass.
Jenney Electric Co., Indianapolis, Ind.
Mather Electric Co. (The), Hartford, Conn.
Meyer, Curt W., 357 4th av., N. Y.
Meyrose, F. & Co., 733-735 S. 4th st., St. Louis, Mo.
Moore, Leonard & Co., Sears, bet. 2d & 3d sts., Dayton, O.
Pittsburgh Electric Co., 213 Wood st., Pittsb'g, Pa.
Schaefer Electric Mfg. Co., Boston, Mass.
Schuyler Electric Co, Middletown, Conn.
Schuyler Electric Light Co., Hartford, Conn.
Standard Lighting Co. (The), 151-153 Seneca st., Cleveland, O.
Stellar Electric Co., 91 State st., Boston, Mass.
Swan Lamp Mfg. Co., Cleveland, O.

Electric Light Construction Apparatus and Supplies.

Acme Electric and Illuminating Co., 106 Liberty st., N. Y.
Alleghany County Light Co., Pittsb'g, Pa.
American Electric Mfg. Co., 3 E. 14th st., N. Y.
American Tool and Machine Co., 84 Kingston st., Boston, Mass
Arnoux & Hochhausen Electric Co., 480 Pearl st., N. Y.
C. B. Arsino Electrical Co., 5 E. Court st., Springfield, Mass.
Badger Electric Co., 208 Pullman Bldg, Chicago, Ill.
Ball Electric Light Co., 18 Cortlandt st., N. Y.
Ball Electric Light Co., 39 Dearborn st., Chicago, Ill.
Ball Electric Light Co., Equitable Bldg., Boston, Mass.
Ball Electrical Illuminating Co., 131 W. 38th st., N. Y.
Ball Electric Light Co., Mail Bldg., Toronto, Ont.
Barshor, Thos. C. & Co., 28 Laight st., Balt., Md.
Baxter Electric Mfg. and Motor Co., 11 South st., Balt., Md.
Bergman & Co., 292 av. B, N. Y.
Bernstein Electric Light Co., 48 Congress st., Boston, Mass.
Billings & Spencer Co., Hartford, Conn.
Bishop, W. S., 95 Grand av., New Haven, Conn.
Bogart, A. L., 22 Union sq., N. Y.
Boston Electric Co., 548 Wash'n st., Boston, Mass.
Brooklyn Electric Construction Co., 71 B'way, B'klyn, N. Y.
Brown Electric Co., 400 Wood st., Pittsb'g, Pa.
Brush Electric Co., Cleveland, O.; 36 Union sq., N. Y.; 130 E. Washington st., Chicago, Ill.
Brush-Swan Electric Light Co., 36 Union sq. and 204 Elizabeth st., N. Y.
Buck, W. J., Son & Co., 407 N. 8th st., Phila., Pa.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
California Electric Light Co., 222 Jessie st., San Francisco, Cal.
Chicago Arc Light & Power Co., 189 La Salle st., Chicago, Ill.
Claflin & Kimball, 143 Federal st., Boston, Mass.
Clark Electric Co., 159 Chambers st., N. Y.
Clark Insulated Electric Wire Co. 419 Walnut st., Phila., Pa.
Colburn, I. W. & Co., 130 Main st., Fitchburg, Mass.
Consolidated Electric Light Co., 32 Nassau st., N. Y.
Consolidated Electric Light & Power Co., 44 B'way, N. Y.
Card Motor Co., Cincinnati, O.
Cowl & Van Denburg, 40 W. Quincy st., Chicago, Ill.
C. & C. Motor Co., 90 S. 5th av , N. Y.
Daft Electric Light Co., 115 B'way, N. Y.
Detroit Electrical Works, Detroit, Mich.
Edison Electric Illuminating Co., 255 Pearl st., N. Y.
Edison Electric Light Co., 65 5th av., N. Y.
Edison Electric Light Co. of Europe (Ltd.), 40 Wall st., N. Y.
Edison Electric Light Co., 185 & 187 Dearborn st., Chicago, Ill.
Edison Lamp Co., 21 Ann st., N. Y.
Edison Machine Works, Schenectady, N. Y.
Edison Spanish Colonial Light Co., 71 B'way, N. Y.
Edison Mfg. Co., 65 5th av., N. Y.
Electrical Accumulator Co., 44 B'way, N. Y.
Electric Construction & Supply Co., 145 B'way, N. Y.
Electrical Const. & Main Co., 200-202 N. 3d st., Phila., Pa.
Electrical Development & Mfg. Co., 197 Congress st., Boston, Mass.
Electro-Dynamic Co., 224 Carter st., Phila., Pa.
Electric Gas Lighting Co., 35 Arch st., Boston, Mass.
E. R. Electric Light Co., 52 B'way, N. Y.
Electric Light & Supply Co., 235 Pearl st., N. Y.
Electric Power Co., 115 B'way, N. Y.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago., Ill.
Electric & Machine Co. (The), 71 Sudbury st., Boston, Mass. 77,
Emery, Cyrus & Co., 115 Dearborn st. (Room 25), Chicago. Ill.
Empire City Electric Co., 15 Dey st., N. Y.
Excelsior Electric Co., 13 Dey st., N. Y.
Excelsior Electric Co., 139 E. Madison (Room 23), Chicago, Ill.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Forest City Electric Works, 26 S. Water st., Cleveland, O.
Forsaith, S. C. & Co., Manchester, N. H.
Ft. Wayne Jenney Electric Light Co., 115 E. Monroe st., Chicago, Ill.

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Ft. Wayne Jenney Electric Light Co., Ft. Wayne, Ind.
Freeman Warren & Co., The, 106-108 Liberty st., N. Y.
Fuller, Holtzer & Co., 27 Arch st., Boston, Mass.
Gibson Electric Co., 45 B'way, N. Y.
Gleason Mfg Co., E. P., 181 Mercer st., N. Y.
Globe Carbon Co. (The), C. and P. R. R., n. Euclid av., Cleveland, O.
Globe Electric Co., 46 S. Water st., Cleveland, O.
Grand Rapids Electric Light & Power Co., Grand Rapids, Mich.
Greeley, E. S., & Co. (The), 7 Dey st., N. Y.
Hammond, W. J., 100 Wood st., Pittsb'g, Pa.
Harlem Lighting Co., 242 East 122d st., N. Y.
Hartford Dynamic Co., Hartford, Conn.
Hawkeye Electric Light Mfg. Co., Oskaloosa, Ind.
Hazazer & Stanley, 32 Frankfort st., N. Y.
Heisler Electric Light Co., 809 S. 3d st., St. Louis, Mo.
Horn, Brannen & Forsyth Mfg. Co., 427 N. Broad st., Phila., Pa.
Hussey Re-heater and Steam Plant Improvement Co., 15 Cortlandt st., N. Y.
Isolated Electrical Accumulator Co., 18 Cortlandt st., N. Y.
Jackson & Morgan, 16 Exchange pl., N. Y.
Jarvis Engineering Co., 109 Liberty st., N. Y.; 61 Oliver st., Boston; 81 Lake st., Chicago.
Jenney Electric Co., Indianapolis, Ind.
Johnson, Holland & Co., 227 La Salle st., Chicago, Ill.
Julien Electric Co., 120 B'way, N. Y.
Kelly, James F., 19 Dey st., N. Y.
Kinsey, L. C. & Co., Williamsport, Pa.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Loomis, Burdett, Hartford, Conn.
Loomis Electric Mfg. Co. (The), Equitable Bldg., Boston, Mass.
Mackinnon, J. A., Machinery Co. (The), 22 Warren st., N. Y.
Mather Electric Co., 38 La Salle st., Chicago, Ill.
Mather Electric Co., Manchester, Conn.
Mather Electric Light Co., Hartford, Conn.
Meyer, Curt W., 357 4th av., N. Y.
Midland Electric Co., 1213 Harney st., Omaha, Neb.
Mitchell, Vance & Co., 386 Broadway, N. Y.
Moffett, Hodgkins & Clarke, Watertown, N. Y.
Mt. Morris Electric Light Co., 56 Broad st., N. Y.
Mutual Electric Mfg. Co., 292 Graham st., B'klyn, N. Y.; 20 Nassau st., N. Y.
National Carbon Co. (The), Wilson av. & L. S. & M. S. R. R., Cleveland, O.
Newark Electric Light & Power Co., Newark, N. J.
New England Wiring & Construction Co., 244 Washington st., Boston, Mass.
N. Y. Electric Construction Co., 242 E. 122d st., N. Y.
Nordyke & Mormon Co., Indianapolis, Ind.
Novelty Electric Co., 5th & Locust sts., Phila., Pa.
Olmstead Electric Light Co., 79 John st., N. Y.
Olmstead Electric Light & Power Co., 19 Whitehall st., N. Y.
Pannock Battery Electric Light Co., 44 B'way, N. Y.
Partrick & Carter, 114 S. 2d st., Phila., Pa. **69.**
Pearce & Jones, 79 John st., N. Y.
Pennock Underground Conduit & Surface Telegraph Co., 19 Whitehall st., N. Y.
Pettingill, F. E. & Co., 167 Congress st., Boston, Mass.
Pittsburgh Carbon Co. (Ltd.), Pittsb'gh, Pa.
Pittsburgh Electric Co., 213 Wood st., Pittsb'gh, Pa.
Pond Engineering Co., St Louis & Kansas City, Mo.
Post & Co., Pearl & Elm sts., Cincinnati, O.
Pride, Geo. H., 9 Dey st., N. Y.
Rees, Henry G., 730 Sanscom st., Phila., Pa.
Remington, E. & Sons, Ilion, N. Y.
Richter Electric Co. (The), 117-121 N. Front st., Camden, N. J.
River & Rail Electric Light Co., 45 B'way, N. Y.
Royal Electric Co., Montreal, Can.
Sawyer-Man Electric Co., 32 Nassau st., N. Y.; 33 Federal st., Boston, Mass.
Schaefer Electric Mfg. Co., Boston, Mass.
Schuyler Electric Mfg. Co., Hartford, Conn.; 39 Broadway, N. Y.
Schuyler Electric Co., Middletown, Conn.
Shaw & Geary, 55 N. 7th st., Phila., Pa.
Silvey Electric Light Co., Lima, O.
Simplex Electrical Co., Boston, Mass.
Skeele, Frank H., 45 B'way, N. Y.
Sperry Electric Light Motor & Car Brake Co., 201 Royal Ins. Bldg., Chicago, Ill.
Sprague Motor Co., 16 Broad st., N. Y.
Sprague Electric Railway Motor Co., Boston, Mass.
Standard Carbon Co. (The), Hamilton st. & C. P. R. R., Cleveland, O.
Standard Electric Light Co., 211 Centre st., N. Y.
Standard Electrical Works, S. W. cor. Pearl & Elm sts., Cincinnati, O.
Star Iron Tower Co., Fort Wayne, Ind.
Sun Electric Light Co., Woburn, Mass.
Sun Light Co., 52 B'way, N. Y.
Swan Lamp Mfg. Co., Cleveland, O.
Tesla Electric Light Mfg. Co., Rahway, N. J.
Thomson-Houston Electric Co., 178 Devonshire st., Boston, Mass.; 115 B'way, N. Y.; Pullman Bldg., Chicago, Ill.
Tompkins, D. A. Co. (The), Charlotte, N. C.
Toronto Electric Light Co., 69 Sherburne st., Toronto, Ont.
Town of Lake Electric Light Co., Packers av., n. 44th st., Chicago, Ill.
Tremont Electric Lighting Co., 10 Mt. Wash'n av., Boston, Mass.
Tucker Electrical Mfg. Co., 35 B'way, N. Y.
Union Electric Co., 123 N. 2d st., Phila., Pa.
United Electric Co., 89 Euclid av., Cleveland, O.
U. S. Electric Lighting Co., 120 B'way, N. Y.; 216 La Salle st., Chicago, Ill.
U. S. Illuminating Co., 59 Liberty st., N. Y.
Van De Poel Electric Mfg. Co., 21 N. Clinton st., Chicago, Ill.
Virginia Electric Light & Power Co., 63 Wall st., N. Y.
Vitrite & Luminoid Co., 182 Fulton st., N. Y.
Waterhouse Electric & Mfg. Co., Hartford, Conn.
Weather Electric Co. (The), Hartford, Conn.
Western Electric Co., 227 S. Clinton st., Chicago, Ill.; 70 Trinity pl., N. Y.
Westinghouse Electric Co., Pittsburgh, Pa.; 17 Cortlandt st., N. Y. **vi.**
Whiting Mfg. Co., Cedar Rapids, Iowa.
Woodhouse & Rawson, 17 Dey st., N. Y.
Yonkers Schuyler Electric Light Co., 56 Broad st., N. Y.

Electric Lighting for Steamships and Railroads.

Am. Electric Mfg. Co., 3 E. 14th st., N. Y.
Julien Electric Co., 120 Broadway, N. Y.
Pennock Battery Electric Light Co., 33 Kemble Bldg., N. Y.

Electric Light Globes.

Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.
Excelsior Flint Glass Co., Pittsb'g, Pa.
Franklin Flint Glass Works, Oxford and Howard sts., Phila., Pa.
Gleason, E. P., Mfg. Co., 181 Mercer st., N. Y.
Lantern Globe Co. (The), Bellaire, O.
Libbey, W. L., & Son, 29 Murray st., N. Y.; 155 Franklin st., Boston, Mass.
Lovell, F. H., & Co., 118 John st., N. Y.
New England Glass Works, Boston, Mass.
Phœnix Glass Co., 729 Broadway, N. Y.; 43 6th av., Pittsb'g, Pa.

Electric Light Towers.

Star Iron Tower Co., Ft. Wayne, Ind.
Thillis, F. Sons & Co., 104 Kent av., Brooklyn, N. Y.

Electro Taps—Waterproof Joints.

Okonite Co. (The), 13 Park Row, N. Y. **ii.**

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Electric Test Apparatus.

Electric Mfg. Co., 311 River st., Troy, N. Y.
Electric Supply Co., 171 Randolph st., Chicago, Ill.
Greeley, E. S. & Co., 5 Dey st.. N. Y.
Queen, James W. & Co., 924 Chestnut st., Phila., Pa.
Russell, Albert L., Boston, Mass.

Electric Time Apparatus.

Electric Standard Time Co., 79 Milk st., Boston, Mass.
Standard Electric Time Co. (The), 342 State st., New Haven, Conn.

Elevator—Belt Power.

Middlebrook Elevator Mfg. Co., 110 W. Larned st., Detroit, Mich.

Elevators—Hand Power.

Burgoyne & Robison, 386 Robert st., St. Paul, Minn.
Howard, Geo. C., 19 S. 18th st., Phila.; 12 Cortlandt st., N. Y.
Lagerquist, G., Minneapolis, Minn.
Middlebrook Elevator Mfg. Co., 110 W. Larned st., Detroit, Mich.
O'Donnell & Barrett, 53 Center st., Cleveland, O.

Elevators—Hydraulic.

Bathrick, H. E., 81 Haverhill st., Boston, Mass.
Crane Elevator Co., 54 Devonshire st., Boston, Mass.
Granville Hydraulic Elevator Co., 1193 B'way, N. Y.
Losey, F. C., Louisville, Ky.
McAdams & Cartright, 57 Elm st., N. Y.
Middlebrook Elevator Mfg. Co. (The), 110 W. Larned st., Detroit, Mich.
Steam Water Elevator Co. (The), 450 Linn st., Cincinnati, O.

Elevators—Passenger and Freight.

Abbott, J. F., & Co., 49 Purchase st., Boston, Mass.
Ainslie, Cochran & Co., Main, c. 10th sts., Louisville, Ky.
Atchison & Little, 20 W. Center st., Cleveland, Ohio.
Atchison Elevator Co., Atchison, Kan.
Albertson & Douglass Machine Co. (The), 97 Main st., New London, Conn.
Alesdorf, W. C., 212 Vine st., St. Louis, Mo.
Armour, Dole & Co., 13 Metropolitan Blk., Chicago, Ill.
Barbour & Stedman, 145 Central av., Cincinnati, Ohio.
Bartlett, Hayward & Co., Pratt, c. Scott st., Balt., Md.
Bates, James, 1 President st., Balt., Md.
Birch W. H., 119 Beale st., San Francisco, Cal.
Blasi, John N., 54 W. B'way, N. Y.
Bonney, H. T. & Co., 7 Bowker st., Boston, Mass.
Boston Machine Mfg. Co., Granite, c. 1st st., S. Boston, Mass.
Brewer, Elias, 267 Federal st., Boston, Mass.
Brewer, E., 149 B'way, N. Y.
Brigham, G. W., 251 Spring st., N. Y.
Brock, W. D., Milwaukee, Wis.
Burgoyne & Robison, 386 Robert st., St. Paul, Minn.
Burrows & Cowen, 154 W. B'way, opp. Lispenard st., N. Y.
Canfield, F. P., 104 Utica st., Boston, Mass.
Cannon, F. C., 45 Orange st., New Haven, Conn.
Capital Elevator Co., Indianapolis, Ind.
Central Elevator Co., St. Louis, Mo.
Chase Turbine Mfg. Co., Orange, Mass.
Chrystal, Walsh & Moyles, 210 1st st., Troy, N. Y.
Clearrs, N. P., Central whf., Boston, Mass.
Cohoes Iron Foundry and Machine Co., Cohoes, N. Y.
Crane Elevator Co., 219 S. Jefferson st., Chicago, Ill.; 40 Wall st., N. Y.; 111 Water st., Pittsburgh, Pa.; 54 Devonshire st., Boston, Mass.
Creamer, Geo. N., 3269 Sansom st., Phila., Pa.
Currier, Cyrus & Sons, 17-21 R R. pl., Newark, N. J.
Curran, J. H., 135 W. 3d st., Cincinnati, O.
Cushing, N. B., ft. Morris st., Jersey City, N. J.
Dammerall, J. W., 94 High st., Boston, Mass.
Dassell Elevator Co., Dassell. Minn.
Degraw, W. L., 223 E. 22d st., N. Y.
Dennis, N. M. & Co., 170 Water st., Cincinnati, O.
Donohue, Thos., 237 E. 42d st., N. Y.
Dyer, C. W., 308 N. 3d st., Phila., Pa.
Eaton & Prince, 74 Michigan av., Chicago, Ill.
Eck & Hoeneman, 167 Elm st., N. Y.
Edelmeyer & Morgan, 347 W. 49th st., N. Y.
Edwards, J. & Co., 412 Water st., N. Y.
Egin, W., 12 Charlestown st., Boston, Mass.
Ehrsam, J. B., Machine Co., Enterprise, Kans.
Elevator Safety & Motor Co., 243 B'way, N. Y.
Elevator Safety Attachment Co , 42 Congress st., Boston, Mass.
Ellison, Francis, 52 Liberty st., N. Y.
Ellithrope, F. T., 38 Park Row, N. Y.
Ellithrope Air-Brake Co., 56 to 64 Waldo pl., Chicago, Ill.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. **57.**
Excelsior Elevator Guard & Hatch Cover Co., Equitable Bldg., 120 B'way, N.Y.
Fairmount Machine Works. Phila., Pa.
Farrel & Larsen, 415 E. 124th st., N. Y.
Felber's, Geo., Machine Works, 307-309 Gratiot st., St. Louis, Mo.
Fitts, Rice & Co., 65 Beacon st., Worcester. Mass.
Fox, H., 211 Centre st., N. Y.
Frank, E. & Son, 642 W. Pratt st , Balt., Md.
Frisbie, D & Co., 144 Ashmun st., New Haven, Conn.
Frisble, D. & Co., 112 Liberty st., N. Y.
Gordon Bros., 141 Spring st., N. Y.
Granville Hydraulic Elevator Co., 170 B'way, N. Y.
Graves, L. S. & Son, 30 Centre st., Rochester, N. Y.
Graves, L. S. & Son, 46 Cortlandt st., N. Y.
Great Western Mfg. Co.. Leavenworth, Kans.
Grunow, F. A.. 22 Union st., New Orleans, La.
Hair, J. J., 106 8th st., Louisville, Ky.
Hale, W. E. & Co., 99 Griswold st., Detroit, Mich.
Hale, W. E. & Co., 187 La Salle st., Chicago, Ill.
Hanford, M., 27 Tremont Row, Boston, Mass.
Harrison, Edward Mill Co. (The), New Haven, Conn.
Harrison Safety Boiler Works, 41 Dey st., N. Y.; Phila., Pa.
Harrington, Edwin, Son & Co., 15th, c. Pennsylvania av., Phila., Pa.
Hart, J., 925 6th av., N. Y.
Harttert, W & Co., Milwaukee, Wis.
Haughton, N.. Huron, n. Lafayette st., Toledo, Ohio.
Haven, J, L. & Co., 56 Plum st., Cincinnati, O.
Hawkins Machine Co., 49 High st., Boston, Mass.
Hickey, J., 35 Hawley st., Boston, Mass.
Hill & Welsh, 36 Pearl st., N. Y.
Henderson Bros., Leonard, c. Porter st., Waterbury, Conn.
Hoffman, Chas. W., 309 W. 36th st., N. Y.
Hoffman, C. D., 117 Vine st., St. Louis, Mo.
Holyoke Machine Co., Holyoke, Mass.
Holmes, Blanchard, 37-39 Charlestown st., Boston, Mass.
Holmes & Blanchard, 37 Charlestown st., Boston, Mass.
Houghton, J. H., 66 Canal st., Boston, Mass.
Houston Elevator Co., Houston, Tex.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Howard Iron Works, Buffalo, N. Y.
Hudner, Frank J., 209 E. 22d st., N. Y.
Ireland, W. H., 28 State st., Boston, Mass.
Iron City Elevator & Machine Works, 69 Diamond st., Pittsb'gh, Pa.
Jallings & Manning, 230 S. Clinton st., Chicago, Ill.
Jeffrey Mfg. Co. (The), Columbus, O.

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John T. Noye Mfg. Co. (The), Buffalo, N. Y.
Joslin, H. A., 70 Kilby st., Boston, Mass.
Kansas City Elevator Mfg. Co., Kansas City, Mo.
Keir, John, 106-110 Liberty st., N. Y.
Kerrigan, John & Co., 163 John st., N. Y.
Kleckhefer Elevator Mfg. Co., Milwaukee, Wis.
Kimball, C. E., 93 Oliver st., Boston, Mass.
Kimball Bros., Anamosa, Iowa.
Kirker, J. G., 989 W. Main st., Louisville, Ky.
Lagerquist, G., Minneapolis, Minn.
Lane & Bodley Co., John, c. Water st., Cincinnati, O.
Lange, G. W. & C. A., Exeter, N H.
Lichner Mfg. Co. (The), Columbus. O.
Link-Belt Machinery Co., 11-23 S. Jefferson st., Chicago, Ill.
Louisville Machine & Elevator Works, 717-733 E. Main st., Louisville, Ky.
Lowell Machine Shop, 28 State st., Boston, Mass.
McAdams & Cartright, 57 Elm st., N. Y.
McCalvey, E. E., 602 Cherry st., Phila., Pa.
McCoy, J., 211 Centre st., N. Y.
McNicoll, A. J. & Co., San Francisco, Cal.
Marshall Bros., 65 Diamond st., Pittsburgh, Pa.
Mason, Volney W. & Co., Lafayette st., r. of 405 High st., Providence, R. I.
Matthews, E. S., 113 Devonshire st., Boston, Mass.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Moyles, H., 210 1st st., Troy, N. Y.
Merchants' Elevator Co., St. Louis, Mo.
Meyer, Henry, 22 Union st., New Orleans, La.
Middlebrook Elevator Mfg. Co., 110 W. Larned st., Detroit, Mich.
Miller & Johnson, Harrison av., n. Brighton Station, Cincinnati, O.
Milliken, W. H., 22 California st., San Francisco, Cal.
Mitchell, C. H. & Co., 105 Michigan st., Chicago, Ill.
Moline Elevator Co., Moline, Ill.
Moon, E. W., 10th & St. Charles sts., St. Louis, Mo.
Moore & Wyman, 37 Foundry st., Boston, Mass.
Morse-Williams & Co., 411 Cherry st., Phila., Pa.; 108 Liberty st., N. Y.
Morse, Williams & Co., 1105 Frankford av., Phila., Pa.
Muckle, M. R., Jr., & Co., 114 S. 6th st., Phila., Pa.
Munson & Oldham, Zanesville, O.
Murtaugh, Jas., 145-147 E. 42d st., N. Y.
Nordyke & Marmon Co., Indianapolis, Ind.
National Hod Elevating Co., 812 Wash'n av., Phila., Pa.
O'Donnell & Barrett, 53 Centre st., Cleveland, O.
O'Keefe, W., 914 Locust st., St. Louis. Mo.
Otis Brothers & Co., 35, 36 & 37 Park Row, N. Y.
Pacific Iron Works, Bridgeport, Conn.
Parsons, H., Marlboro, Mass.
Phinney, E. R., 35 Hawley st., Boston, Mass.
Poage, T. K. & Co., 168 Water st., Cincinnati, O.
Post, E. C., 22 Burns Blk., Detroit, Mich.
Prince, J., 13 Church st., N. Y.
Reedy Elevator Works, 530-536 Canal st., N. Y.
Reedy, H. J., 128 E. 8th st., Cincinnati, O.
Reedy, J. W., Elevator Mfg. Co., 83 Ill's st., Chicago, Ill.
Reynolds, F. M., 46 Cortlandt st., N. Y.
Richards Elevator Works, 1222 Ridge av., Phila., Pa.
Richards, Hyde & Co., 202 Davis st., Balt., Md.
Riehle Bros., 50 S. 4th st., Phila., Pa.
Robbins, I. C., 100 Federal st., Boston, Mass.
Roberts, G. J. & Co., Dayton, O.
Rowell, C. S., 135 Pearl st, Boston, Mass.
Safety Elevator Co., 170 B'way, N. Y.; 710 Olive st., St. Louis, Mo.
Salem Foundry and Machine Shop, Salem, Mass.
Sandusky Machine and Agricultural Works, Sandusky, O.
Schlemmer, O., 450 Linn st., Cincinnati, O.
Scott, G., 112 8th st., Louisville, Ky.
See, A. B. & Co., 116-120 Front st., B'klyn, N. Y.
Shaw, Kendall & Co., Toledo, O.
Shaw, L. D., 17 Chardon st., Boston, Mass.
Shea, J. & Co., Milwaukee, Wis.
Sherrill Roper Engine Co., 460 Hicks st., B'klyn, N. Y.
Sioux City Foundry & Machine Works, Sioux City, Ia.
Skinner & Leary, 5-7 R. R. pl., Newark, N. J.
Sullivan Machine Co., Claremont, N. H.
Sullivan & Ehlers, 166 Broadway, Albany, N. Y.
Sulzer & Vogt, 717 E. Main st., Louisville, Ky.
Smith, A. & Co., Milwaukee, Wis.
Smith, Beggs & Ranker Machine Co., 2201 N. Main st., St. Louis, Mo.
Smith, Hill & Co., Quincy, Ill.
Smith, Levett, 127 Albany st., Boston, Mass.
Smith, R. C. & Co., 1 B'way, N. Y.
Smith & Haldeman Elevator Co., Toledo, O.
Smith & Haldeman Elevator Co., Superior, c. Oak st., Toledo, O.
Smith & Lovett, 125 Albany st., Boston, Mass.
Snowden & Cowman, 9 W. Fayette st., Balt., Md.
South Boston Iron Co., 57 Foundry st., S. Boston, Mass.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.
Stoddard & Co., 15 Cornhill, Boston, Mass.
Stokes & Parrish Machine Co., 18 Cortlandt st., N. Y.; 30th, c. Chestnut st., Phila., Pa.
Taylor, W. O. & Co., 11 Chardon st., Boston, Mass.
Tillman, John F., 800 Fulton st., B'klyn, N. Y.
Tubbs & Humphreys, Cohoes, N. Y.
Union Elevator Co., Minneapolis, Minn.
Vance, J., 41 Marion st., N. Y.
Vought, N. F., 159 E. 54th st., N. Y.
Wallace, J., 44 Milwaukee av., Chicago, Ill.
Walsh, Peter H., 333 West st., N. Y.
Warner, W., 714 W. 8th st., Cincinnati, O.
Washburn Machine Shop, Boynton, near Highland st., Worcester, Mass.
Waterbury Machine Co. (Oakville), Waterbury, Conn.
Watson & Stillman, 204-210 E. 43d st., N. Y.
Webb, A. B. & Co., 60 Cliff st., N. Y.
Webb, J. R., 120 B'way, N. Y.
Webber, G. L. & G. A., 95 N. J. R. R. av., Newark, N. J.
Welchans, A. C., Lancaster, Pa.
Westfall, J. T., Belvidere, Ill.
West, L. H., 223 E. 23d st., N. Y.
White, E. A., 125 Albany st., Boston, Mass.
Whittier Elevator Co., 306 11th av., N. Y.
Whittier Machine Co., 1117 Tremont st., Boston, Mass.; 91 Liberty st., N. Y.
Wile, Z., 191 Tremont st., Boston, Mass.
Wood, Thomas & Co., 22d and Wood sts., Phila., Pa.,
Worcester Elevator Co., Worcester, Mass.
Wythe Mfg. Co., 12 Cortlandt st., N. Y.

***Eliminator—Hine's.**

Hine & Robertson, 45 Cortlandt st., N. Y. **82.**

Emery, Emery Paper and Cloth, Etc.

Adamascobite Co., Winchester, N. H.
Albany Emery Wheel Co., Hudson av. c. Dove st., Albany, N. Y.
Am. Twist Drill Co., Meredith Village, N. H.
Andres, H., 22 N. 4th st., Phila., Pa.
Baeder, Adamson & Co., 67 Beekman st., N. Y.; 143 Milk st., Boston, Mass.; 730 Market st., Phila., Pa.
Baeder Glue Co. (The), 1 and 3 Pearl st., Cincinnati, O.
Bainbridge Bed Rock Emery Works, Bainbridge, N. Y.
Barbour, A. E., 36 Beekman, N. Y.
Behr, Herman & Co., 75 Beekman st., N. Y.
Bell, Thos. J., & Co., s. e. c. B'way and 2d st., Cincinnati, N. Y.
Best, Levi, Jr., 39 John st., N. Y.
Bloodgood, J. F., & Co., Williamsport, Pa.
Boerum Bros., 19 Cliff st., N. Y.
Burns, Egbert R., 247 Pearl st., N. Y.
Butterfield, Isaac. Meredith Village, N. H.
Carpenter, O. M., E. Charleston, Vt.
Coryell Flint Paper Co., Williamsport, Pa.

The numbers following names indicate page on which the firm advertises.

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Crystal Emery Wheel Co., 251 Hawley st., Northampton, Mass.
Detroit Emery Wheel Co., 244 Clark st., Cincinnati, O.; Jefferson av., c. Lincoln st., Detroit, Mich.
Diamond Mills Emery Co., Adams st., c. Kensington av., Fkd., Phila., Pa.
Dunbar, G., & Co., 74 Pearl st., Boston, Mass.
Erric, H., 624 Cherry st., Phila., Pa.
Grant Corundum Wheel Co., 351 Main st., Springfield, Mass.; Chester, Mass.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Hampden Emery Co., Chester, Mass.
Hewitt, C. B. & Bros., 48 Beekman st., N. Y.
Jackson Mills Emery Co., Easton, Pa.
Jackson, T. A., 388 11th av., N. Y.
Kay Bros. & Co., 121 Water st., Pittsb'g, Pa.
King, D. Webster & Co., 166-168 High st., Boston, Mass.
Montgomery & Co., 105 Fulton st., N. Y.
New York Belting and Packing Co., Sandy Hook, Conn.; 15 Park Row, N. Y. v.
Northampton Emery Wheel Co., Houston, Tex.; Richmond, Va.; 20 S. Canal st., Chicago, Ill.; 61 Carondelet st., New Orleans, La.; Leeds, Mass.; Pearl, c. Elm st., Cincinnati, O.
Norton Emery Wheel Co., Barber's Crossing, Worcester, Mass.
Norton's Pat. Solid Emery Wheels, 39 John st., N. Y.
Nutt, J. D., 32 John st., N. Y.
Orr, J. C., 75 Nassau st., N. Y.
Page, F. A., Dedham, Mass.
Page, Harlan, 143-145 N. 3d st., Phila., Pa.
Phila. Emery Wheel Co., 624 Cherry st., Phila., Pa.
Pratt, J. H., 15 S. Water st., Cleveland, O.
Pratt & Whitney Co. (The), 1 Flower st., Hartford, Conn.
Revere Rubber Co., 63 Franklin st., Boston, Mass.
Rose, I. M. Norwalk, Conn.
Scott, F. J., 50 Federal st., Boston, Mass.
Sheehy Bros., 428 E. 62d st., N. Y.
Simmons Hardware Co., 900 Washington st., St. Louis, Mo.
Springfield Glue & Emery Wheel Co., 33-37 Taylor st., Springfield, Mass.
Starr, O. A., 18 Devonshire st., Boston, Mass.
Tanite Co., Stroudsburg, Pa.
Union Stone Co., 53 W. 2d st., Cincinnati, O.; 36 John st., N. Y.; 38-40 Hawley st., Boston, Mass.
Van Arminge, S., 306 Pearl st., N. Y.
Vermont Emery Wheel Co., W. Charleston, Vt.
Vitrified Wheel Co., 36 Pearl st., Boston, Mass.; Westfield, Mass.
Walpole Emery Wheel Co., Walpole, Mass.
Walpole Emery Mills Co., S. Walpole, Mass.
Waltham Emery Wheel Co., Waltham, Mass.
Warren, T. M. & Co., 243 River st., Troy, N. Y.
Washington Mills Emery Mfg. Co., 188 Webster st., Boston, Mass.
Washington Mills Emery Co., Grafton, Mass.
Wentworth Mfg., Co., 92 Pearl st., Boston, Mass.
Wiggin & Stevens, Malden, Mass.
Wray Emery & Paper Polishing Wheel Co., 212 Lake st., Chicago, Ill.
Zimmerman & Brown, 228 Market st., Newark, N. J.

Emery Wheel Dressers.

Chicago Screw Co. (The), 94 W. Washington st., Chicago, Ill.

Emery Wheels.

Albany Emery Wheel Co., Hudson av., c. Dore st., Albany, N. Y.
Andres, H., 22 N. 4th st., Phila., Pa.
Atkins, E. C. & Co., Indianapolis, Ind.
Ball, D. H. & Sons, Renova, Pa.
Ball & Taylor, Minneapolis, Minn.
Baldridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Butterfield, Isaac, Meredith, N. H.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Buss Machine Works, Grand Rapids, Mich.
Carpenter & Co., Geo. B., 202 S. Water st., Chicago, Ill. 31.
Celluloid Emery Wheel Co., 228 Market st., Newark, N. J.
Cole, J. Wendell, P. O. Box 152, Chicago, Ill.
Crystal Emery Wheel Co., Northampton, Mass.
Curtis & Co., 811 N. 2d st., St. Louis, Mo.
Detroit Emery Wheel Co., Hart & Jefferson aves., Detroit, Mich.; Columbus, O.
Detroit Saw Works, 66 Fort st., E., Detroit, Mich.
Diamond Emery Wheel & Machine Co., 48 S. Canal st., Chicago, Ill.
Diebel Mfg. Co., 3d and Cumberland sts., Phila., Pa.
Emerson, Smith & Co., Beaver Falls, Pa.
Gem Emery Wheel & Machine Co., Middletown, N. Y.
Grant Corundum Wheel Co., 106 W. Wash'n st., Chicago, Ill.
Hampden Emery Co., Chester, Mass.
Hart, Gilbert, Detroit, Mich.
Heaton's Bed Rock Emery Works, Bainbridge, N. Y.
Hull, Andrew L., Bridgeport, Conn.
Kay Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Kimbark, S. D., Michigan av., S. E. cor. E. Lake st., Chicago, Ill.
Lehigh Valley Emery Wheel Co., Lehighton, 1
McCormick, J. A., 150 1st av., Pittsburgh, Pa.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Manning, Maxwell & Moore, 111 & 113 Liberty st., N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y.
Northampton Emery Wheel Co. (Western Office), 20 S. Canal st., Chicago, Ill.; Leeds, Mass.
Norton, F. B., 41 Water st., Worcester, Mass.
Norton Emery Wheel Co., 41 S. Canal st., Chicago, Ill.; 39 John st., N. Y.
Obermayer Foundry Supply Mfg. Co. (The S.), Cincinnati, O.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Pratt & Whitney Co. (The), Hartford, Conn.
Radcliff, Rowe & Co., 43 Plum st., Cincinnati, O.
Ridgley R. B., 42 Woodbridge st, Detroit, Mich.
Robinson & Cary, St. Paul Minn.
Robertson, W. H., 48 S. Canal st., Chicago, Ill.
Rogers & Ordway, St. Paul, Minn.
Rogers, H. A., 19 John st., N. Y. iv.
Rose, I. M., Plymouth av., Norwalk, Conn.
Sibley, Freeman K., Waltham, Mass.
Slate, Dwight, Hartford, Conn.
Snow, M. L., West Sterling, Mass.
Springfield Glue & Emery Wheel Co., 35 Taylor st., Springfield, Mass.
Stow Flexible Shaft Co. (Ltd.), 2218-2224 Penn av., Phila., Pa. 26.
Sweney, J. P. & Co., 601 N. Main st., St. Louis, Mo.
Tanite Co. (The), Stroudsburg, Pa.
Union Emery Wheel and Machine Co., 12 Cortlandt st., N. Y.
Union Stone Co., 38-40 Hawley st., Boston, Mass.
Vitrified Wheel Co., Westfield, Mass.
Vitrified Wheel Co., 220 Franklin st., Boston, Mass.
Waltham Emery Wheel Co., Waltham, Mass.
Wellington Emery Wheel Co., 428 E. 62d st., N. Y.
Wray Emery and Paper Polishing Wheel Co., Albany, N. Y.
Zucker & Levett Chemical Co. (The), 538-564 W. 16th st., N. Y.

Enamel—Iron.

Dixon Crucible Co., 68 Reade st., N. Y.
Kohler, Haysen & Stehn, Sheboygan.
Nubian Iron Enamel Co., 207 S. Canal st., Chicago, Ill.

Engines—Automatic.

Alexander, G. W., 207 Wash'n. av., Minneapolis, Minn.

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Armington & Simms, Providence, R. I.
Automatic Valve & Engine Co., 34 & 36 W. Morrow st., Chicago, Ill.
Ball Engine Co., Erie, Pa.
Barney & Kilby, Sandusky, O.
Brown, C. H. & Co., Fitchburg, Mass.
Buckeye Engine Co., Salem, O.
Cooper, C. & G. & Co., Mt. Vernon, O. **58.**
Cummer Engine Co., Cleveland, O.
Dexter Engine Co., 40 Cortlandt st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Fairbanks & Co., 302 Wash'n av., St. Louis, Mo.
Farquhar, A. B. & Son, York, Pa.
Fitchburg Steam Engine Co., Fitchburg, Mass.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Hooren, Owens & Rentschler Co. (The), Hamilton, O.
Ide & Son, A. L., Springfield, Ill.
Jarvis Engineering Co., 61 Oliver st., Boston, Mass.
Keefer, Horace A. & Co., 54 Sheidley Bldg., Kansas City, Mo. **88.**
Lane & Bodley Co. (The), 283 Water st., Cincinnati, O.
McIntosh, Seymour & Co., Auburn, N. Y.
McKinley Engine Co., 17 B'way, Cincinnati, O.
McLaughlin, Geo. G., Mfg. Co., 49 Haverhill st., Boston, Mass.
N. Y. Safety Steam Power Co., 30 Cortlandt st., N. Y.
New York Safety Steam Power Co., 64 & 66 S. Canal st., Chicago, Ill.
Novelty Iron Works, Dubuque, Iowa.
Noye, John T. Mfg. Co., Buffalo, N. Y.
Page & Harlan, 143 N. 3d st., Phila., Pa.
Parke & Lacy, 21 Fremont st., San Francisco, Cal.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Payne, B. W. & Sons, Elmira, N. Y.; 45 Dey st., N. Y.; 10 S. Canal st., Chicago.
Prospect Machine & Engine Co., Cleveland, O.
Providence Steam Engine Co., Providence, R. I.
Rollins, Geo. A. & Co., Nashua, N. H.
Russell Wheel & Foundry Co., Massillon, O.
Sawyer, C. A. & Co., Fitchburg, Pa.
Sharp, Thomas & Co., Salem, O.
Smith, Geo. A., 1419 Main st., Richmond, Va.
Southwark Foundry & Machine Co., Washington av. & 5th st., Phila., Pa.
Stevens, Corwin & Co., 118 Chambers st., N. Y.
Sturtevant, B. T., 115 Purchase st., Boston, Mass.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Taylor Mfg. Co., Chambersburg, Pa.
Tompkins, D. A. Co., Charlotte, N. C.
Twiss, Nelson W., 25 Whitney av., New Haven, Conn.
Utah & Montana Machinery Co., 259 S. Main st., Salt Lake City, Utah.
Westinghouse, Church, Kerr & Co., 17 Cortlandt st., N. Y. **vi. & vii.**
Westinghouse Machine Co., Pittsb'gh, Pa.
Williams Engine Co., 195 La Salle st., Chicago, Ill.
Young & Thomas, 42 Cortlandt st., N. Y.

Engines—Corliss.

Bullock M. C. Mfg. Co., 138 Jackson st., Chicago, Ill. **10 & 11.**
Corliss Steam Engine Co., Providence, R. I.
Dickson Mfg. Co., Scranton, Pa.
Fishkill Landing Machine Co., Fishkill-on-the Hudson, N. Y. **iv.**
Fraser & Chalmers, Fulton & Union sts., Chicago, Ill.
Hewes & Phillips Iron Works, Newark, N. J.
Hooven, Owens & Rentschler Co., Hamilton, O.
Madison Machine Co., Madison, Ind.
Watson & Stillman, 204 E. 43d st., N. Y.

Engines—Electric Light.

Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
N. Y. Safety Steam Power Co., 64-66 S. Canal st., Chicago, Ill.
Ogden Engine Co., 40-42 W. Quincy st., Chicago, Ill.
Schuyler Electric Light Co., Hartford, Conn.

Engines—Fire.

Ahrens Mfg. Co., 22-26 Webster st., Cincinnati, Ohio.
Button Fire Engine Co., Waterford, N. Y.
California Fire Apparatus Mfg. Co., 221 Sansome st., San Francisco, Cal
Cole Bros., Pawtucket, R. I.
Cook, H. N., 405 Market st., San Francisco, Cal.
Gleason & Bailey Mfg. Co. (Ltd.), 20 W. Houston st., N. Y.; Seneca Falls, N. Y.
Hayward, S. F. & Co., 351 Canal st., N. Y.
Howe Pump & Engine Co., Indianapolis, Ind.
Jackson, A. L., 26 Union st., Boston, Mass.
Manchester Locomotive Works, 40 Water st., Boston, Mass.; Manchester, N. H.
Magra Steam Pump Works, 118-122 Plymouth st., B'klyn, N. Y.
Rumsey & Co. (Ltd.), 19 Dey st., N. Y.
Rumsey & Co., Seneca Falls, N. Y.
Russell Pump & Engine Co. (The), Southington, Conn.
Shepherd, T. K., Ottumwa, Iowa.
Silsby Mfg. Co., Seneca Falls, N. Y.; 51 John st., N. Y.

Engines—Gas.

Clerk Gas Engine Co., 1012 Filbert st., Phila., Pa.
Continental Gas Engine Co., 231 B'way, N. Y.
Dickson Mfg. Co., Scranton, Pa.
Economic Gas Engine Co., 34 Dey st., N. Y.
Economic Motor Co., 34 Dey st., N. Y.
Edwards, G. B., 142 Chambers st., N. Y.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Gas Engine & Motor Co., E. 131st st., nr. Brook av., N. Y.
Goodwin Gas Stove & Meter Co., 142 Chambers st., N. Y.; Phila., Pa.; Chicago, Ill.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Korting Gas Engine Co., 60 Barclay st., N. Y.
Lancaster, James H., 187 B'way, N. Y. **4.**
Latham, H. H., 39 Dearborn st., Chicago, Ill.
Lawson Gas Engines, 203-205 Centre st., N. Y.
Lombard Gas Engine Co., State st., Hartford, Conn.
Manning, A. C., 47 Dey st., N. Y.
Middlebrook Elevator Mfg. Co., Detroit, Mich.
Michell, C. H. & Co., 105 Michigan st., Chicago, Ill.
National Meter Co., 252 B'way, N. Y.
Otis Bros. & Co., N. Y.; Boston, Mass.; Phila., Pa.; Pittsb'gh, Pa.
Otto Gas Engine Works, 33d, c. Walnut sts., Phila., Pa.
Otto Gas Engine, 18 Vesey st., N. Y.
Schleicher, Schamm & Co., 33d & Walnut sts., Phila., Pa.; 130 E. Washington st., Chicago, Ill.
Sombart Gas Engine Co., 215 Centre st., N. Y.
Universal Engine Co., Rochester, N. Y.
Welch & Lawson, 205 Centre st., N. Y.
Williams & Orton Mfg. Co., 150 Water st., Sterling, O.
Yonkers Mfg. Co., 16 Dey st., N. Y.

Engines—Hoisting.

Alexander, G. W., 207 Washington av., N. Minneapolis, Minn.
Baggaley, J., 462 11th av., N. Y.
Beatty & Sons, M., Welland, Ont.
Beckett & McDowell, Mfg. Co., 120 Liberty st., N. Y.
Bullock, M. C. Mfg. Co., 138 Jackson st., Chicago, Ill. **10 & 11.**
Burleigh Rock Drill Co., Fitchburgh, Mass.
Chisholm, Wm. & Sons, Cleveland, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Clayton Air Compressor Works, 43 Dey st., N. Y. **9.**
Copeland & Bacon, 85 Liberty st., N. Y.; 535 Arch st., Phila., Pa.

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Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Davis, A. J., 69 N. Jersey av., Newark, N. J.
Dickson Mfg. Co., Scranton, Pa.
Eagle Iron Works, 252 Woodbridge st., W. Detroit, Mich.
Edwards & Co., Joseph, 412 Water st., N. Y.
Excelsior Iron Works Co., Columbus st., Cleveland, O.
Forsaith S. C. & Co., Manchester, N. H.
Fraser & Chalmers, Fulton & Union sts., Chicago, Ill.
Frisbie, D. & Co., New Haven, Conn.; 112 Liberty st., N. Y.
Fuller Iron Works, 416 S. Main st., Providence, R. I.
Harmer Foundry & Machine Works, Harmer, O.
Hercules Iron Works, Canal & Carroll sts., Chicago, Ill.
Hunt Company, C. W., 111 B'way, N. Y.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Kendall, Edward & Sons, Cambridgeport, Mass.
Kendall & Roberts, Cambridgeport, Mass.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Litchfield Car & Machine Co., Litchfield, Ill.
McCalvey, E. E., 602 Cherry st., Phila., Pa.
Melcher, Chas. W., 811 N. 2d st., St. Louis, Mo.
Monitor Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Morris Co., Machine & Iron Co., Dover, N. J.
Morse, Williams & Co., 108 Liberty st., N. Y.; 411 Cherry st., Phila., Pa.
Mundy, J. S., 24 Prospect st., Newark, N. J.
Osborn, Louis & Co., 74 Lewis st., E. Boston, Mass.
Pacific Iron Works, Bridgeport, Conn.
Parke & Lacy, 8 California st., San Francisco, Cal.
Rawson & Morrison, 27-31 Main st., Cambridgeport, Mass.
Rochester Machinery Mfg. Co., 34 W. Monroe st., Chicago, Ill.
Saxton, J. C., 52 B'way, N. Y.
Thompson & Campbell, 1030 Germantown av., Phila., Pa.
Toomey, Frank, 131 N. 3d st., Phila., Pa.
Traud, Alexander, E. Ferry st., Newark, N. J.
Vulcan Iron Works, Wilkesbarre, Pa.
Webb & Watson, 17 Border st., E. Boston, Mass.

Engines—Horizontal and Vertical.

Beggs, James & Co., 9 Dey st., N. Y.
Colwell Iron Works, 27th st. and N. R., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Fitchburg Steam Engine Co., Fitchburg, Mass.
Greenfield Steam Engine Works, East Newark, N. J.
Morris Machine Works, Baldwinsville, N. Y.
N. Y. Central Iron Works, Geneva, N. Y.
N. Y. Safety Steam Power Co., 66 S. Canal st., Chicago, Ill.
Orr & Sembower, Reading, Pa.
Pittsburgh Electric Co., 213 Wood st., Pittsb'g, Pa.
Shepard Mfg. Co., Union City, Mo.

Engines—Hydraulic.

Benham Hydraulic Motor Co., Providence, R. I.
Blake Mfg. Co. (The), 44 Washington st,. Boston, Mass.
Chandler Water Motor Co., 1325 Washt'n st., Boston, Mass.
Knowles Steam Pump Co., 44 Washt'n st., Boston, Mass.
Nudd, Chas. & Co., 65 Westminster st., Providence, R. I.
Roots, P. H. & F. M., Connersville, Ind.
Scoppert & Rife, Waynesboro, Va.
Southwark Foundry and Machine Co., Washt'n av. and 5th st., Phila., Pa.

Engines—Marine.

Cuyahoga Steam Furnace Co., Cleveland, O.
Cleveland Shipbuilding Co., Cleveland, O.
Colwell Iron Works, 27th st. and N. R., N. Y.
Colt's Patent Fire Arms Mfg. Co., Hartford, Conn.
Atlantic Works, 76 Border st., Boston, Mass.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Fletcher, C. W. & A., 267 West st., N. Y.
Fore River Engine Co , Weymouth, Mass.
Greenfield, W. G. & G., East Newark, N. J,
Harbertson, J. & Sons, Brownsville, Pa.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Hercules Iron Works, Canal & Carrol sts., Chicago, Ill.
Kane, Thos., & Co , 137 Wabash av., Chicago, Ill. **28 & 29.**
Madison Machine Co., Madison, Ind.
Morgan Iron Works, ft. 9th st., E. R., N. Y.
Neafie & Levy, Beach & Palmer sts., Phila., Pa. **26.**
New England Ship Building Co., Bath, Me.
N. Y. Safety Steam Boiler Co., 30 Cortlandt st., N. Y.
Portland Co. (The), Portland, Me.
Robinson-Rea Mfg. Co., 124 Water st., Pittsb'g, Pa.
Shipman Engine Mfg. Co., Rochester, N. Y.
Shipman Engine Co., 92 Pearl st., Boston, Mass.
Skinner & Arnold, 205 B'way, Albany, N. Y.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Sweeney, A. J. & Son, 27th & Chapline sts., Wheeling, W. Va.
Tarrant, Robt., 52 Illinois st., Chicago, Ill.
Union Iron Works, 216 Market st., San Francisco, Cal.
Vulcan Iron Works Co., Oswego, N. Y.
Warden, McClelland & Co., 25 B'way, Cincinnati, O.
Webb & Watson, 17 Border st., E. Boston, Mass.
Wright, William, Newburgh, N. Y.

Engines—Petroleum.

Kane, Thos., & Co., 137 Wabash av., Chicago, Ill. **28 & 29.**
Lancaster, James H., 187 B'way, N. Y., **4.**
Robertson, W. H., 48 S. Canal st., Chicago, Ill.
Shipman Engine Co., 92 Pearl st., Boston, Mass.

Engines—Portable.

Armstrong Bros., Springfield, O.
Centre, Clark, Sandusky, O.
Chandler & Taylor, Indianapolis, Ind.
Cleveland & Hardwick, Erie, Pa.
Cooper, C. & G. & Co., Mt. Vernon, O. **58.**
Erie Engine Works, Erie, Pa.
Frick & Co., Waynesboro, Pa.
Gaar, Scott & Co., Richmond, Ind.
Greenfield, W. G. & G., E. Newark, N. J.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Hodge, Samuel F., & Co., 320 Atwater st., Detroit, Mich.
Holmes & Blanchard, 37 Charlestown st., Boston, Mass.
Jones & Hitchings, Portland, Me.
June, D. & Co., Fremont, O.
King, H. & Son, Corry, Pa.
Knippenberg, J. H., 57 Centre st., Cleveland, O.
Lebanon, Mfg. Co., Lebanon, Pa.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Lovegrove & Co., 152 N. 3d st., Phila., Pa.
Richmond Locomotive & Machine Works, Richmond, Va. **12.**
Ritchie & Dyer Co., Hamilton, O.
Rochester Machinery Mfg. Co., 34 W. Monroe st., Chicago, Ill.
Russell & Co., 20 Maryland st., Indianapolis, Ind.
Spangenberg, Pendleton & Co., Warren, O.
Skinner Engine Co., Erie, Pa.
Springfield Engine & Thresher Co., Springfield, Ohio.
Vulcan Machine Co., Middleport, O.
Watertown Engine Co., Watertown, N. Y.
Webb & Watson, 17 Border st., E. Boston, Mass

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Weston Engine Co., Painted Post, N. Y.
Wheeler Engine Co., Milldale, Conn.
Williams, Bros., Ithaca, N. Y.
Wood, Taber & Morse, Eaton, N. Y.

Engines—Pumping.

Dickson Mfg. Co., Scranton, Pa.
Gordon & Maxwell Co. (The), Hamilton, O.
Knowles Steam Pump Works, 98 Liberty st., N. Y.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Welch & Lawson, 205 Centre st., N. Y.
Worthington, Henry R., 88 Liberty st., N.Y. **89.**
Wright, Wm., Newburgh, N. Y.

* Engines—Rotary.

Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**

Engines—Slide Valve.

Geo. G. McLaughlin Mfg. Co., 49 Haverhill st., Boston, Mass.

Engines—Stationary.

Allis, Edw. P. & Co., Milwaukee, Wis.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Buckeye Engine Co., Salem, O.
Dederick, Z. P., Sherman, Texas.
Denison, W. C., 88 S. Division st., Grand Rapids, Mich.
Erie Engine Works, Erie, Pa.
Fishkill Landing Machine Co., Fishkill-on-the-Hudson, N. Y. **iv.**
Harris, Wm. A., Providence, R. I.
Hoovens, Owens, Reutschler Co. (The), Hamilton, O.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill.
Lane & Bodley Co. (The), 267-283 Water st., Cincinnati, O.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Litchfield Car & Machine Co., Litchfield, Ill.
N. Y. Central Iron Works, Geneva, N. Y.
N. Y. Safety Steam Power Co., 64 S. Canal st., Chicago, Ill.
Noye, J. T. Mfg. Co. (The), Buffalo, N. Y.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Pond Engineering Co., 707-709 Market st., St. Louis, Mo.
Providence Steam Engine Co., Providence, R. I.
Richmond Locomotive & Machine Works, Richmond, Va. **12.**
Smith, Beggs & Rankin, St. Louis, Mo.
Tod, William & Co., Youngstown, O.
Union Iron Works Co., 216 Market st., San Francisco, Cal.
Vulcan Iron Works Co., Oswego, N. Y.
Whiting Mfg. Co., Cedar Rapids, Ia.

Engines—Steam.

Ackley, Myers F., 1416 Wash'n st., Phila., Pa.
Adams, Austin, 43 Dey st., N. Y.
Adams Bros. & Co., Findlay, O.
Ætna Machine Works, Warren, O.
Agerter, Stevenson & Co., Upper Sandusky, O.
Ahrens Mfg. Co., 22-26 Webster st., Cincinnati, O.
Ainslee, Cochran & Co., Main, c. 10th st., Louisville, Ky.
Albertson & Douglass Machine Co. (The), New London, Conn.
Albro, G. D., 85 Pleasant av., Fall River, Mass.
Alexander, G. W., 207 Wash'n av., Minneapolis, Minn.
Allan & Sidnell, Norwalk, O.
Allen, Governor, Co., 98 Milk st., Boston, Mass.
Allen, H. A., 45 B'way, N. Y.
Allen & Cram, Raleigh, N. C.
Allis, Edw. P. & Co., 48 S. Canal st., Chicago, Ill.; Milwaukee, Wis.
Altoona Car Works (Ltd.), Altoona, Pa.
Ames Iron Works, 18 S. Canal st., Chicago, Ill.; 38 Cortlandt st., N. Y.; Oswego, N. Y.
Anderson Foundry & Machine Works, Anderson, Ind.
Archambault, A. L., 1160 Beach st., Phila., Pa.
Armington & Sims Engine Co., 546 High st., Providence, R. I.; 81 E. Lake st., Chicago, Ill.
Armitage, Herschell & Co., Tonawanda, N. Y.
Armstrong Bros. Engine Works, Springfield, O.
Arnold, G. W. & Son, Ionia, Mich.
Arthur W. & Co., 136 Water st., B'klyn, N. Y.
Atlantic Steam Engine Works, Water, c. Adams st., B'klyn, N. Y.
Atlantic Works, 72 Border st., E. Boston, Mass.
Atlas Engine Works, 9th st. and Martindale av., Indianapolis, Ind.; 15 S. Canal st., Chicago, Ill.
Aultman, C. & Co., Canton, O.
Aultman & Taylor Co. (The), Mansfield, O.
Automatic Safety Boiler and Engine Co., 828 Chapel st., New Haven, Conn.
Badger Bros., West Quincy, Mass.
Bailey Mfg. Co., Owosso, Mich.
Bair & Gazzam (Ltd.), 86 3d av., Pittsb'g, Pa.
Baker, G. W. & Co., Wilmington, Del.
Ball Engine Co., Erie, Pa.
Barber, J. E. Co., Norwich, Conn.
Barber, Wm. H. & Bro., Allentown, Pa.
Barnes, Chas. & Co., 40 Sycamore st., Cincinnati, Ohio.
Barney & Kilby, Sandusky, O.
Barnard, G. O., 70 Astor House, N. Y.
Barrett's, B. Son & Co., Wooster, O.
Bartlett, A. F. & Co., East Saginaw, Mich.
Brass Founday & Machine Works, Fort Wayne, Ind.
Brasshor, T. C. & Co., 28 Light st., Balt., Md.
Bauroth & Sheehan, Springfield, O
Bay State Iron Works, Erie, Pa.
Beall Engine, Boiler & Machine Works, Cumberland, Md.
Beckett & McDowell Mfg. Co., 120 Liberty st., N. Y.
Beggs, James & Co., 9 Dey st., N. Y.
Bell, D., Evans, c. Norton st., Buffalo, N. Y.
Benjamin & Co., 17 S. Canal st., Chicago, Ill.
Berry & Place Machine Co., 8 California st., San Francisco, Cal.
Best, J. & Son, Lancaster, Pa.
Bigelow & Co. (The), River, n. James st., New Haven, Conn.
Bigler & Co., Clearfield, Pa.
Bills, C. W., 76 Sudbury st., Boston, Mass.
Birdsall Co. (The), Toledo, O.; Auburn, N. Y.; 8 N. Laight st., Balt., Md.
Blair Bros. & Co., Pearl & Plum sts., Cincinnati, Ohio.
Blake, J. H., Batavia, N. Y.
Blandy, F. J. L., Zanesville, O.
Blettner Mfg. Co., 884 Central av., Cincinnati, O.
Blymyer Mfg. Co., McLean av., Cincinnati, O.
Bole, H. M., Duquesne Way, c. Point st., Phila., Pa.
Booth, Miller & Co., Youngstown, O.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Bovaird & Seyfang, Bradford, Pa.
Bowdle Bros., Piqua, O.
Boyce, A. J., East Liverpool, O.
Brainard Milling Machine Co., Hyde Park, Mass.
Braman, Dow & Co., 4 Haymarket sq., Boston, Mass.
Brass Foundry & Machine Works, Fort Wayne, Ind.
Braycon, Geo. B., Providence, R. I.
Brazelle Mfg. Co., St. Louis, Mo.
Brewer, H. & Co., Tecumseh, Mich.
Brewer, S. D., 52 B'way, N. Y.
Brightman-Stoker Co., 168 Bank st., Cleveland, Ohio.
Brown, C. H. & Co., Fitchburg, Mass.
Brownell & Co., Dayton, O.
Buckeye Engine Co., Salem, O.; Jackson & Clinton sts., Chicago, Ill.
Builders' Iron Foundry, 22 Codding st., Providence, R. I.
Bullock, M. C. Mfg. Co., 138 E. Jackson st. (Room 510), Chicago, Ill. **10 & 11.**

The numbers following names indicate page on which the firm advertises.

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Burgess, W. F. & Co., 66 School st., Worcester, Mass.
Burleigh Rock-Drill Co., 115 Liberty st., N. Y.
Burlingame, A. & Co., 22 Cypress st., Worcester, Mass.
Bush, P. P., Canton, O.
Butler & Gardner, 200 Liberty st., Pittsb'g, Pa.
Butricks, F. D., 25 Whitney av., New Haven, Conn.
Butterworth & Lowe, Grand Rapids, Mich.
Callahan, W. P. & Co., Dayton, O.
Campbell Engine Co., 45 William st., N. Y.
Campbell, J. O. & Sons, 216 15th st., Louisville, Ky.
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Campbell, Wm. & Co., 356 Main st., Cambridgeport, Mass.
Carlin's, Thos., Sons, Lacock and Sandusky sts., Allegheny, Pa.
Carnie, John A., 223 West st., N. Y.
Carey, Thos. K. & Co., 12 S. Charles st., Balt., Md.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Castle Engine Works, Indianapolis, Ind.
Cavett & McKnight, 36 Penn av., Pittsb'g, Pa.
Central Iron Works, 2014 Jackson st., St. Louis, Mo.
Chandler & Taylor, 370 W. Washington st., Indianapolis, Ind.
Chapman, G. L., Alliance, O.
Chappell, Geo. F., 86 Pike st., N. Y.
Chase & Son, 236 Federal st., Portland, Me.
Chester Foundry and Machine Co., Chester, Pa.
Chicago Steam Boiler and Engine Works, 62 Michigan av., Chicago, Ill.
Chicago Tubular Wire Works, Lake and Clinton sts., Chicago, Ill.
Chillicothe Foundry and Machine Works, Chillicothe, O.
Chisholm, W. & Son, 364 Case st., Cleveland, O.
Chubbuck, S. E. & Sons, 971 Tremont st., Boston, Mass.
Chuse, J. F. & Co., Mattoon, Ill.
Claffy, John, 48 Dey st., N. Y. **91.**
Clark, C. R., Rochester, N. H.
Clark, J. & Co., S. Side Basin, Balt., Md.
Cleveland Ship Building Co., Detroit, c. Center sts., Cleveland, O.
Cleveland & Hardwick, Erie, Pa.
Climax Mfg. Co., Corry, Pa.
Cline, L. D., Alliance, O.
Clow, James B. & Son, 222 Lake st., Chicago, Ill.
Coates, J., Erie, Pa.
Cochran & Mins, New Orleans, La.
Coe & Wilkes, Painesville, O.
Cole Bros., 17 Bailey st., Pawtucket, R. I.
Coleman H., Dudley & Bro., 9 Perdido st., New Orleans, La.
Coleman, J. B., Elmira, N. Y.
Collignon & Grimard, Washt'n, c. Perry sts., Buffalo, N. Y.
Colt's Patent Fire-arms Mfg. Co., Colt's Armory, Hartford, Conn.
Columbia Foundry and Machine Works, Columbia, Pa.
Columbus Machine Co., Columbus, O.
Common-Sense Engine Co., Springfield, O.
Cook, R. A. & Co., Stevens' Point, Wis.
Cooper, C. & G. & Co., Mt. Vernon, O. **58.**
Cooper Mfg. Co., Mt. Vernon, O.
Cooke & Co., 22 Cortlandt st., N. Y.
Copeland & Bacon, 85 Liberty st., N. Y.
Corbett, T. M. & Co., Milwaukee, Wis.
Corbett & Norrish, 1416 F st., Washington, D. C.
Corliss Steam Engine Co., Charles st. R. R. Crossing, Providence, R. I.
Covel Machine Co., Fall River, Mass.
Cowdry Four Cylinder Engine Co., 163 Dearborn st., Chicago, Ill.
Cox & Sons, 204 N. 4th st., Phila., Pa.
Cramp, Wm., & Sons, Beach, n. Norris st., Phila., Pa.; 39 B'way, N. Y.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.; 92 Liberty st., N. Y.
Crenzbour, Robert, B'klyn, N. Y.
Crown Iron Works, 113 2d av., S. E., Minneapolis, Minn.
Cruickshank, D. B., 243 Dyer st., Providence, R. I.
Cruickshank, Geo. M., 286 Dyer st., Providence, R. I.
Cruickshank, Moyer & Co., Danville, Pa.
Currier, Cyrus & Sons, 21 R. R. pl., Newark, N. J.
Curtis, F. J., Spencerport, N. Y.
Davis, L. D., Erie, Pa.
Dederick, P. K. & Co., Tivoli, N. Y.
Deeley, R. & Co., ft. W. 32d st., N. Y.
Delamater, C. H. & Co., ft. W. 13th st., N. Y.
De Loach Mill Mfg. Co., Atlanta, Ga.
Dempster Engine Works, 34 Washington st., Buffalo, N. Y.
Denison, W. C., Grand Rapids, Mich.
Depoy, W. B. & Co., Indianapolis, Ind.
Dexter Engine Co., 46 Cortlandt st., N. Y.
Dickson Mfg. Co., 96 Lake st., Chicago; 112 Liberty st., N. Y.
Doane, Charles W., Saybrook, Conn.
Dodge, S. C., Chattanooga, Tenn.
Donaldson & Whitman, 178 Ohio st., Buffalo, N. Y.
Donegan & Swift, 174 Fulton st., N. Y.
Doty, John, Toronto, Can.
Douglas, Frank, 253 S. Canal st., Chicago, Ill.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Dunbar, R. & Son, Mississippi, c. Perry st., Buffalo, N. Y.
Dunkirk Iron Works, Dunkirk, N. J.
Du Quoin Iron Works, Du Quoin, Ill.
Duval & Co., Zanesville, O.
Eagle Iron Works, 254 Woodbridge st., Detroit, Mich.; Terre Haute, Ind.; Mississippi, c. Perry st., Buffalo, N. Y.
Economy Steam Engine & Foundry Co., Malone, N. Y.
Enterprise Machine Co., 423 4th st., S., Minneapolis, Minn.
Erie City Iron Works, 9 Dey st., N. Y.; Erie, Pa.
Evans, C. H., 110 Beale st., San Francisco, Cal.
Excelsior Iron Works, 100 N. Clinton st., Chicago, Ill., Cleveland, O.
Exeter Machine Works, 19 Federal st., Boston, Mass.
Fahey, Pfaller & Co., 13th & Pike sts., Pittsb'gh, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Farquhar, A. B. & Son, York, Pa.
Farrar & Teft, 60 Perry st., Buffalo, N. Y.
Fawcett & Son, Alliance, O.
Fay, J. A. & Co., Cincinnati, O.
Felber, Geo., 307-309 Gratiot, St. Louis, Mo.
Field & Crawshaw, Lewiston, Me.
Fifield, G. E., South Newmarket, N. H.
Filer & Stowell Co. (Ltd.), Clinton & Florida sts., Milwaukee, Wis.
Fisher Engine, Foundry & Machine Works, 23d and Smallman sts., Pittsb'gh, Pa.
Fishkill Landing Machine Co., Fishkill, N. Y. **iv.**
Fitchburg Steam Engine Co., 423 Arch st., Phila., Pa.; Fitchburg, Mass.
Fletcher, W. & A. Co., 266 West st., N. Y.
Foley, C. E., 379 B'way, B'klyn, N. Y.
Fornan, Henry, 76 Lacock st., Allegheny, Pa.
Forsaith, S. C., Machine Co., Manchester, N. H.
Fostoria Foundry & Machine Works, Fostoria, Ohio.
Fox, C., Stamford, Conn.
Frame Bros., Barnesville, O.
Fraser & Chalmers, Union and Fulton sts., Chicago, Ill.
Freeman, F. I., Warren, O.
Fremont Foundry & Machine Co., Fremont, Mich.
Frey, Sheckler & Hoover, Bucyrus, O.
Frey & Motten, York, Pa.
Frick & Co., Waynesboro, Pa.
Frisbie, D. & Co., 112 Liberty st., N. Y.
Fritsch, F., McMicken av., Cincinnati, O.
Fritz, Geo. J., 2018 S. 3d st., St. Louis, Mo.
Frost Mfg. Co., Galesburg, Ill.
Fuel, Gas & Electric Engineering Co., Pittsb'gh, Pa.
Fuller's, G. Sons, Hallowell, Me.

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Fuller Iron Works, 416 S. Main st., Providence, R. I.
Furness Bros., 20 N. Desplaines st., Chicago, Ill.
Gaar, Scott & Co., Richmond, Ind.
Garratt, W. T., 138 Fremont st., San Francisco, Cal.
Geiser Mfg. Co., Waynesboro', Pa.
Gemlo, D. W. & Son, 917 Wash'n av., S., Minneapolis, Minn.
Gilson, G. W., Petrolia, Pa.
Gill, Philip H., 11-17 Bowne st., B'klyn, N. Y.
Gleason, R. W., 519 Water st., N. Y.
Glenn, M. W., 5 av. S. bet. 1st and 2d sts., Minneapolis, Minn.
Globe Foundry & Machine Works, Niles, O.
Globe Machine Co., Lima, O.
Globe Steam Heater Co., North Wales, Pa.
Gordon, Strobel & Laureau (Ltd.), 708 Penn av., Pittsb'gh, Pa.
Grainger & Co., 10th, bet. Main st. and the river, Louisville, Ky.
Grant Locomotive Works, 43 Wall st., N. Y.
Graves, L. S. & Son, 30 Centre st., Rochester, N. Y.
Gray Bros. & Co., Cardington O.
Greenfield, W. G. & G., 400 N. 5th st., E. Newark, N. J.
Greenwald, I. & E. Co., 248 E. Pearl st., Cincinnati, O.
Gregory, H. P. & Co., Fremont & Mission sts., San Francisco, Cal.
Griffith & Wedge, Zanesville, O.
Guyon, Miller & Co., Downington, Pa.
Hamblin, Sons & Co., Greenville, Pa.
Hamon, Gibbs & Co., Corry, Pa.
Hampson, Edw. P. & Co., 36 Cortlandt st., N. Y.
Harlan & Hollingsworth Co., Wilmington, Del.; 115 B'way, N. Y.
Harmes, A. G., 92 1st av., Pittsb'g, Pa.
Harmon, Gibbs & Co., Corry, Pa.
Harris, W. A., Park, n. Promenade st., Providence, R. I.
Harrisburg Car Mfg. Co., Harrisburg, Pa. 7.
Hartford Engineering Co., Hartford, Conn.
Haughton, N., Huron, n. Lafayette st., Toledo, Ohio.
Hawthorn & Co., 12 Cortlandt st., N. Y.
Hayes, John J., Kent, c. West st., B'klyn, E. D., N. Y.
Hazlet Iron Works, Meadville, Pa.
Hazleton Iron Works, Hazleton, Pa.
Hegewald, Chas. & Co., Water, bet. Pearl and Bank sts., New Albany, Ind.
Hendy, Joshua, Machine Works, 39 Fremont st., San Francisco, Cal.
Hendey Machine Co. (The), Torrington, Conn.
Hercules Iron Works, Canal and Carroll sts., Chicago, Ill.
Herreshoff Mfg. Co., Bristol, R. I.
Hewes & Phillips, Orange, c. Ogden st., Newark, N. J.
Hickey, L. J., Springfield O.
Hill, Clarke & Co., 800 N. 2d st., St. Louis, Mo.
Hinkley, A. H., 23 Hermon st., Worcester, Mass.
Hinckley & Egery Iron Co., Bangor, Me.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Holmes & Blanchard, 87-89 Charlestown st., Boston, Mass.
Holly Mfg. Co., 205 La Salle st. (Room 20), Chicago, Ill.; Lockport, N. Y.
Holt, Geo. F., 77 Haverhill st., Boston, Mass.
Hooven, Owens & Rentschler Co., Hamilton, O.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Hoxsie & Son, Holloway, Mich.
Hussey Re-Heater & Steam Plant Improvement Co., 15 Cortlandt st., N. Y.
Hutchison, J. R., 105 Sandusky st., Allegheny, Pa.
Ide, A. L. & Son, Springfield, Ill.
Ide Automatic Cut-Off Engine, 232 S. Clark st., Chicago, Ill.
Industrial Works, Bay City, Mich.
Innis Mfg. Co., Oil City, Pa.
Iowa Iron Works Dubuque, Iowa.
Ivens, E. M. & Son, S. Peters st., New Orleans, La.
Jarvis, Barnes & Co., Lansing, Mich.
Jarvis Engineering Co., 61 Oliver st., Boston, Mass.
Johnson, C. H., La Grange, Ga.
Johnson, W. C., Fitchburg, Mass.
Jones, E. H. & Co., 225 River st., Cleveland, O.
Jones & Hitchings, Portland, Me.
Jouras & Bateau, Auburn, Me.
June, D. & Co., Fremont, O.
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill.; 419 Walnut st., Phila., Pa.
Kane, Thos & Co., 137 Wabash av., Chicago, Ill. 28 & 29.
Kay Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Kelley, Benjamin F., 91 Liberty st., N. Y.
Kelly, Daniel, 51 N. 7th st., Phila., Pa.
Kelly & Libby, Biddeford, Me.
Kendall, Edward & Sons, 72 to 92 Main st., Cambridgeport, Mass.
Kennedy, D., 315 3d av., S., Minneapolis, Minn.
Kensington Engine Works (Ltd.), Beach & Vienna sts., Phila., Pa.
Kentucky Machinery Co., 1202 W. Main st., Louisville, Ky.
Kerrick, J. H., 2d av., N. & 5th sts., Minneapolis, Minn.
King, H. & Son, Corry, Pa.
King Iron Works, 226 Ohio st., Buffalo, N. Y.
Kingsford Foundry & Machine Works, Oswego, N.Y.
Kingsland Bros., & Co., 28 S. Canal st., Chicago, Ill.
Kingsland & Ferguson Mfg. Co., 823 N. 2d st., St. Louis, Mo.,
Kinsey, N. B., Saginaw, Mich.
Kimble Engine Co., 39 Dearborn st., Chicago, Ill.
Kirkwood, A. J. & Co., 12-14 S. Canal st., Chicago, Ill.
Knight, E. O., 142 Union st., Worcester, Mass.
Knippenberg, J. H., 57 Center st., Cleveland, O.
Knowlson & Kelly, 58 River st., Troy, N. Y.
Knowlton & Walke, Minneapolis, Minn.
Krieger, Burkhardt & Co., 737-745 Central av., Cincinnati, O.
Landis, Ezra F., 537 N. Cherry st., Erie, Pa.
Lane & Bodly Co., 2 John st., Cincinnati, O.
Lansing Iron Works, Lansing, Mich.
Lawrence Boiler Works, Lawrence, Mass.
Lawrence Machine Co., 70 Kilby st., Boston, Mass.
Lea, Robert, 1st av. and Ferry st., Pittsb'g, Pa.
Lebanon Mfg. Co., Lebanon, Pa.
Leech, C., 1316 S. 9th st., Phila., Pa.
Leeds & Co., Delord, c. Constance st., New Orleans, La.
Leffel, James & Co., Springfield, O.; 110 Liberty st., N. Y.
Leonard & McCoy, 118 Liberty st., N. Y.
Lewis Foundry and Machine Co. (Ltd.), 1006 Neville st., Pittsb'g, Pa.
Lidback, J. A., Portland, Me.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. iii.
Lima Machine Works, Lima, O.
Litchfield Car and Machine Co., Litchfield, Ill.
Little Daisy Engine Co. (Ltd.), Emlenton, Pa.
Lockyear, Geo. H., Minneapolis, Minn.
Logan Machine and Wood Works, Oil City, Pa.
Lombard, Geo. R. & Co., Augusta, Ga.
Lord, Bowler & Co., 33 Center st., Cleveland, O.
Lovegrove & Co., 143 N. 3d st., Phila., Pa.
McCabe, E. & Co., Lawrence, Mass.
McCarty & Co., Sandy Hill, N. Y.
McCormick, J. A., 150 1st ave., Pittsb'g, Pa.
McCoy & Sanders, 26 Warren st., N. Y.
McCullough Bros., Ypsilanti, Mich.
McDonald, W., Lapeer, Mich.
McGill, Manchester & Co. (Ltd.), 2626 Smallman st., Pittsb'g, Pa.
McGregor, W. & Co., 53-55 S. Clinton st., Chicago, Ill.
McIntosh, Seymour & Co., Auburn, N, Y.
McKay, H., Mfg. Co., Titusville, Pa.
McKinley Engine Co. (The), 17 B'way, Cincinnati, O.
McKinley Engine Co., 21 S. 3d st., Phila., Pa.
McKnight, Wharton, 44 Penn av., Pittsb'g, Pa.
McLaren, John, Hoboken, N. J.
McNamar, J. H., Newark, O.

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McNutt, C. J., Ashtabula, O.
Mackintosh, Hemphill & Co. (Ltd.), ft 12th st., Pittsb'gh, Pa.
Madison Mfg. Co., Madison, Wis.
Manley, H. A. & Co., 235 Congress st., Boston, Mass.
Manning, Jr., Thos. & Co., 100 Merwin st., Cleveland, O.
Mansfield Machine Works (The), Mansfield, O.
Marinette Iron Works Co., 212 Lake st., Chicago, Ill.
Marquette, J. N., 181 W. Falls av., Balt., Md.
Marshall, Graves & Co., Dayton, O.
Martin, F. S., Minneapolis, Minn.
Marvin, W. K. & Sons, Findlay, O.
Mason, J. M., 119 Haverhill st., Boston, Mass.
Means, J. & Co., Steubenville, O.
Mecklenburg Iron Works, Charlotte, N. C.
Metcalf, John T., Quincy, Pa.
Merrill & Bacon, East Saginaw, Mich.
Meyrick & Ferguson, 1111 W. Main st., Louisville, Ky.
Middleton, W. S., 52 John st., N. Y.
Milburn Gin & Machine Co., Memphis, Tenn.
Milholland, J. & J. B., 5th av., c. Tunnel st., Pittsburgh, Pa.
Miller Co. (The), Canton, O.
Miller, Printz & Co., Reading, Pa.
Moltz, J., Williamsport, Pa.
Monongahela Mfg. Co., Monongahela City, Pa.
Morgan Iron Works, 314 E. 9th st, N. Y.
Morrill & Allen, Cambridgeport, Mass.
Morris County Machine & Iron Co., Dover, N. J.
Morris Machine Works, Baldwinsville, N. Y.
Morton Valve Co., Romeo, Mich.
Muncy Traction Engine Co., Muncy, Pa.
Mundy, J. S., 22 Prospect st., Newark, N. J.
Munson Bros, Utica, N. Y.
Murray Iron Works, Burlington, Iowa.
Murray, J. & Son, 102 E. York st., Balt., Md.
Nagle, T. M., Erie, Pa.
Nashua Steam Engine & Mach. Works, Nashua, N. H.
Naylor, Jacob, Girard av., c. Front st., Phila., Pa.
Neafie & Levy, 52 John st., N. Y.; Beach & Palmer sts., Phila., Pa. **26.**
Newcomb, G., Salem, Mass.
Newell Universal Mill Co., 10 Barclay st., N. Y.
N. E. Machine Co., 31 Haverhill st., Boston, Mass.
New England Ship Building Co., Bath, Me.
N. Y. Central Iron Works, Geneva, N. Y.
New York Cylinder Boring Co., 40 John st., N. Y.
N. Y. Engineering Co., 18 Cortlandt st., N. Y.
N. Y. Locomotive Works, 34½ Pine st., N. Y.
N. Y. Safety Steam Power Co., 30 Cortlandt st., N. Y.; Hopkinton, R. I.; 14 S. Canal st., Chicago, Ill.
Nichols & Langworthy Machine Co., Hopkinton, R. I.
Niles Boiler Works, Niles, O.
Northrop Mfg. Co., Camden, N. J.
North Star Iron Works, Minneapolis, Minn.
Northwestern Mfg. Car Co., 20 N. Clark st. (Room 1), Chicago, Ill.
Norwalk Iron Works Co., S. Norwalk, Conn.
Novelty Iron Works, Dubuque, Ia.
Noye, John T., Mfg. Co., 50 Lake View av., Buffalo, N. Y.
Nuttall Bros., 38 Parkway st., Allegheny, Pa.
Ohio Machine Co., Middleport, O.
Ohl, G. A. & Co., 25 James st., Newark, N. J.
Oil City Boiler Works, Oil City, Pa.
Omaha Iron Works, Omaha, Neb.
Oneco Mfg. Co., New London, Conn.
Orr, Wm. B. & Co., 115 Water st., Pittsb'g, Pa.
Orr & Sembower, Reading, Pa.
Osborn, Lewis & Co., 74 Lewis st., E. Boston, Mass.
Ottawa Iron Works Co., Ferrysburg, Mich.
Ottumwa Iron Works, Ottumwa, Ia.
Owens, Lane & Dyer Machine Co., 717 N. 2d st., St. Lewis, Mo.
Pacific Iron Works, Bridgeport, Conn.
Packard, O. L., Milwaukee, Wis.
Packer, Thos. B., Kansas City, Mo.
Paige Mfg. Co. (The), Painsville, O.
Palmer, N. F., Jr., & Co., 785 E. 11th st., N. Y.
Pancoast & Rogers, c. Gold & Platt sts., N. Y.
Park City Machine Co. (The), 88-102 Cannon st., Bridgeport, Conn.
Parsons, H., Marlboro', Mass.
Passenger R. R. Locomotive Mfg. Co., 150 S. 4th st., Phila., Pa.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Payne, B. W. & Sons, 8 S. Canal st., Chicago, Ill.; 45 Dey st., N. Y.
Penney, J. W., Mechanics' Falls, Me.
Penna. Diamond Drill Co., Birdsboro', Pa.
Pennsylvania Iron Works, 50th st., c. Merion av., Phila., Pa.
Perkins, G. W. & Co., 169 Sumner st., E. Boston, Mass.
Perkins Machinery Co., Atlanta, Ga.
Phœnix Iron Co., Trenton, N. J.
Phœnix Iron Works, 16 Dey st., N. Y.; Meadville, Pa.; Wason, n. St. Clair st., Cleveland, Ohio.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Pierce & Thomas, 42 Cortlandt st., N. Y.
Pinkerton, Rob't, Troy, N. Y.
Pitkin Brothers & Co., 152 State st., Hartford, Conn.
Pittsburgh Locomotive and Car Works, 10 6th st., Pittsb'g, Pa.
Pittsburgh Safe & Lock Co., Madison and River avs., Allegheny, Pa.
Place, Geo., 121 Chambers st., N. Y. **31.**
Plummer, W. E., 237 Congress st., Boston, Mass.
Pollard, Luther D., 14-16 S. Canal st., Chicago, Ill.
Pollard & Robertson, Augusta, Ga.
Pomeroy Machine Co., Pomeroy, O.
Pond Engineering Co., St. Louis and Kansas City, Mo.
Pontiac Novelty Works, Pontiac, Mich.
Poole & Hunt, 7 German st., Balt., Md.
Pope Mfg. Co., 291 Wabash av., Chicago, Ill.
Porter Mfg. Co. (Ltd.), Syracuse, N. Y.; 35 S. Canal st., Chicago, Ill.
Porter, Thompson & Co. (Ltd.), Darragh and River aves., Allegheny, Pa.
Portland Co. (The), 58 Fore st., Portland, Me.
Post, John, Jr. & Co., Elmira, N. Y.
Powell, A. C. & Son, Syracuse, N. Y.
Powers, J. A., Troy, N. Y.
Powers, Wm. T. & Son, Grand Rapids, Mich.
Prentiss Tool and Supply Co., 42 Dey st., N. Y.
Prince, J. L., 9 Church st., Albany, N. Y.
Progress Engine & Machine Works, Summerfield, Md.
Prospect Machine & Engine Co., St. Louis, Mo.; 59 S. Canal st., Chicago, Ill.; Cleveland, O.
Providence Steam Engine Co., 373 S. Main st., Providence, R. I.; 51 N. 7th st., Phila., Pa.
Pusey & Jones Co., Wilmington, Del.
Putnam Machine Co., Fitchburg, Mass.; 115 Liberty st., N. Y.
Pyne, W. T., 1036, 1106 & 1107-1117 W. Main st., Louisville, Ky.
Rankin Mfg. Co., 84 Irwin av., Allegheny, Pa.
Ransom, John G., 6 5th av., Pittsburgh, Pa.
Rarig, A. K. & Co., Columbus, O.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rees, James, 4th st., & Duquesne Way, Pittsburgh, Pa.
Reid, G. H. & Son, Warren, O.
Remington & Co., Wilmington, Del.
Renton, W., 67 Water st., Pittsburgh, Pa.
R. I. Locomotive Works, 58 Pine st., N. Y.
Rice, H. W., 56 Bluxome st., San Francisco, Cal.
Rice & Whitacre Mfg. Co., 42-44 W. Monroe st., Chicago, Ill.
Richmond Locomotive & Machine Works, Richmond, Va. **12.**
Rider, Thos. J., ft. W. 13th st., N. Y.
Riley & Cowley, Richards, c. Bowne st., B'klyn, N. Y.
Robeson, J. S., Bridgeton, N. J.
Roberts, J. H. & Co., 118 Merrimac st., Boston, Mass.
Roberts, E. E., 107 Liberty st., N. Y.
Roberts, G. J. & Co., Dayton, O.
Roberts Machine Co., Collegeville, Pa.
Robinson, H. S., 28 State st., Boston, Mass.

The numbers following names indicate page on which the firm advertises.

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Robinson, Rea & Co., 134 Water st., Pittsb'gh, Pa.
Rochester Machinery Mfg. Co., 34 W. Monroe st., Chicago, Ill.
Rochester Machine Tool Works, Rochester, N. Y.
Rochow, F., Bridge & Plymouth sts., Boston, Mass.
Rochow, F., 36 Ridge st., B'klyn, N. Y.
Roger's Locomotive & Machine Works, 44 Exchange pl., N. Y.
Rollins, Geo. A. & Co., Nashua, N. H.
Roth, McMahon & Co., 115 S. Clinton st., Chicago, Ill.
Russell, John W., 52 Hampden st., Springfield, Mass.
Russell Pump & Engine Co. (The), Southington, Conn.
Russell & Co., Massillon, O.
Rumsey, L. M. Mfg. Co., 810 N. 2d st., St. Louis, Mo.
Rowland, F. C. & A. E., 413 Chapel st., New Haven, Conn.
Saginaw Novelty Works, Saginaw, Mich.
Salem Iron Works, Salem, N. C.
Sanders, S. F., 1023 W. Main st., Louisville, Ky.
Sandusky Machine and Agricultural Works, Sandusky, O.
San Francisco Tool Co., 1st and Stevenson sts., San Francisco, Cal.
Savage, Son & Co., 135 Fremont st., San Francisco, Cal.
Schaeffer & Rudenburg, 69 S. Clinton st., Chicago, Ill.
Schart, P., Jr., Columbus, O.
Scheidler Machine Works, Newark, O.
Schleicher, Schumann & Co., 44 W. Van Buren st., Chicago, Ill.
Schleicher, Shumm & Co., Phila., Pa.
Schofield, J. B. & Sons, Macon, Ga.
Sciple, H. M. & Co., 3d, c. Arch st., Phila., Pa.
Scaife Foundry and Machine Co. (Ltd.), 28th and Smallman sts., Pittsburgh, Pa.
Scoville, H. H., 250 S. Clinton st., Chicago, Ill.
Scoville Iron Works, 250 S. Clinton st., Chicago, Ill.
Seymour & Whitlock, 43 Lawrence st., Newark, N. J.
Shakespeare, Smith & Co., 219 Girod st., New Orleans, La.
Shapely Steam Engine Co., 106 Liberty st., N. Y.
Sharp, Thos. & Co., Salem, O.
Shearer & Hicks, Bradford, Pa.
Sheriff and Ashworth Machine Co., 80 Water st., Pittsb'gh, Pa.
Sheriffs, J., Milwaukee, Wis.
Sherill Roper Air-Engine Co., 460 Hicks st., B'klyn, N. Y.
Shipman, A. H. & Co., 254 Mill st., Rochester, N. Y.
Shipman Engine Co., 92 Pearl st., Boston, Mass.
Shipman Engine Mfg. Co., Rochester, N. Y.
Shipman Oil Burning Steam Engine Co., Broad, n. Chestnut st., Phila., Pa.
Shoenberger, Geo. K., 62 Michigan st., Chicago, Ill.
Sinker, Davis & Co., Indianapolis, Ind.
Simpson, Walter L., 18 Cortlandt st., N. Y.
Skinner Engine Co., Erie, Pa.
Skinner & Leary, 5–7 R. R. pl., Newark, N. J.
Smith, Beggs & Rankin Machine Co., 2201 N. Main st., St. Louis, Mo.
Smith, C. F., Iron Works, Titusville, Pa.
Smith, H. B., Machine Co., 925 Market st., Phila., Pa.
Smith, J. E. & Son, 50 B'way, Buffalo, N. Y.
Smith, Myers & Schnier, 323 W. Front st., Cincinnati, O.
Smith, Theo. & Bro., Jersey City, N. J.
Smith & Barnhurst, 40 Cortlandt st., N. Y.
Smith & Sayre Mfg. Co., 46 Bridge st., Newark, N. J.
Smyser, E. G., York, Pa.
Snell, Henri I., 135 N. 3d st., Phila., Pa.
Snell & Mahary, Reading, Pa.
Solner, Emil, 140 W. Lake st., Chicago, Ill.
Southwark Foundry and Machine Co., Washt'n av. and 5th st., Phila., Pa.
Spangenberg, Pendleton & Co., Warren, O.
Springfield Engine & Thresher Co. (The), Springfield, O.
Squier & Homer, Galion, O.
Standard Iron Co., 4th st. & 9th av., S. Minneapolis, Minn.
Star Machine Works, Kokoma, Ind.
Stearns Mfg. Co., Erie, Pa.
Stewart, M. & Bro., 1217 Mallinekrodt st., St. Louis, Mo.
Strang, A. L., Omaha, Neb.
Strong Locomotive Co., 45 B'way, N. Y.
Struthers, Wells & Co., Warren, Pa.
Sturtevant, B. F., Jamaica Plain Station, Boston, Mass.
Sullivan, J. J., 46 S. Canal st., Chicago, Ill.
Sullivan Machine Co., Claremont, N. H.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Supplee Steam Engine Co., Columbia, Pa.
Supplee, T. R., 149 N. 3d st., Phila., Pa.
Sutherland, T. S., Centre Island, Troy, N. Y.
Sutton, F., 39 Le Couteulx st., Buffalo, N. Y.
Swain, Jas. G. Co. (Ltd.), 3105 Smallman st., Pittsb'g, Pa.
Swampscott Machine Co., S. Newmarket, N. H.
Tabor Mfg. Co., 111 Liberty st., N. Y.
Taplin, Rice & Co., Akron, O.
Tarrant, Robert, 52 to 56 Illinois st., Chicago, Ill.
Taylor Mfg. Co., Chambersburg, Pa.; 59 S. Canal st., Chicago, Ill.
Taylor, Wm. & Sons, 23 Adams st., B'klyn, N. Y.
Terrace Iron Works, 62 Terrace st., Buffalo, N. Y.
Theall, Horace, 65 Bethune st., N. Y.
Thomas, J. H. & Sons, Springfield, O.
Thompson, Porter & Co. (Ltd.), Darragh & River sts., Allegheny, Pa.
Thompson & Campbell, 1030 Germantown ave., Phila., Pa.
Tierney, M. J. & Co., 20 N. Canal st., Chicago, Ill.
Tifft, Geo. W., Sons & Co., 15–35 Wash'n st., Buffalo, N. Y.
Titusville Iron Works, Titusville, Pa.
Tod, Wm. & Co., Youngstown, O.
Tood, J. C., 36 Dey st., N. Y.
Tohill, J. A., Pittston, Pa.
Toledo Foundry & Machine Co., Toledo, O.
Tompkins, D. A. Co., Charlotte, N. C.
Toomey, Frank, 131 N. 3d st., Phila., Pa.
Townsend Furnace & Machine Shop, B'way, c. Rensselaer, st., Albany, N. Y.
Trout, H. G., 226 Ohio st., Buffalo, N. Y.
Troy Laundry Machinery Co. (Ltd.), 648 Fulton st., Troy, N. Y.
Trumbull & Cheney, 209 Washington st., Boston, Mass.
Turner, Vaughn & Taylor, Cuyahoga Falls, O.
Twiss, Nelson W., 25 Whitney av., New Haven, Conn.
Union Iron Works, San Francisco, Cal.
Valk & Murdock, Charleston, S. C.
Valley Iron Works, Williamsport, Pa.
Van Buren & Ryder, Carey, O.
Vanderbogart, John H., 62–64 River st., Troy, N. Y.
Vansicien, A. & Co., 15 S. Canal st., Chicago, Ill.
Vansicien, Alexander & Co., 15 S. Canal st., Chicago, Ill.
Velte & McDonald, 3200 Penn av., Pittsb'gh, Pa.
Victor Caloric Engine Co., 7 Beekman, N. Y.
Vulcan Iron Works, Toledo, O.
Wachs, Edw. H., La Salle av., S. W. cor. E. Indiana st., Chicago, Ill.
Wade & Wardell, Cadillar, Mich.
Wainwright Mfg. Co., 93 Liberty st., N. Y.
Waite, Benj. C., 66 N. 1st st., B'klyn, N. Y.
Walker, Marvin H. & Co., 42 S. Canal st., Chicago, Ill.
Wallen, H. D., Jr., Grand Rapids, Mich.
Walworth Construction & Supply Co., 134 Congress st., Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Watertown Steam Engine Co., Watertown, N. Y.
Watson, A., 2138 Dickinson st., Phila., Pa.
Watts, Campbell Co. (The), 298 Ogden st., Newark, N. J.
Watson & Stillman, 210 E. 43d st., N. Y.
Webb & Watson, 17 Border st., E. Boston, Mass.

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Webster & Dustin, Lawrence, Mass.
Weisel & Vilter, 70-78 Chicago st., Milwaukee, Wis.
West Chester Machine Co., West Chester, Pa.
Westinghouse, Church, Kerr & Co., 17 Cortlandt st., N. Y. **vi. & vii.**
Westinghouse Machine Co. (The), Liberty av. & 25th st., Pittsb'gh, Pa.; 14 S. Canal st., Chicago, Ill.
West Point Engine & Machine Co., West Point, Pa.
Wetherill, Rob't & Co., Chester, Pa.; 115 B'way, N. Y.
Wheeler, L., Westfield, Mass.
Wheeler & Melick Co., Hamilton, c. Liberty st., Albany, N. Y.
Wheelock, J., 178 Union st., Worcester, Mass.
Whitehill Rob't, 21 Cortlandt st., N. Y.; Newburgh, N. Y.
Whiting Bros. Mfg. Co., Cedar Rapids, Iowa.
Whiting Mfg. Co., Cedar Rapids, Iowa.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.; 91 Liberty st., N. Y.
Wickes Bros., East Saginaw, Mich.
Wiggs & Bacon Co., Birmingham, Ala.
Wilcox & Co., Pittsb'gh, Pa.
Wilkin Mfg. Co., Milwaukee, Wis.
Willard, Chas. P. & Co., 236 Randolph st., Chicago, Ill.
Williams Bros., Ithaca, N. Y.
Williams, White & Co., Moline, Ill.
Williams & Orton Mfg. Co., Sterling, Ill.
Wilson, J. B. & Co., Woodbridge & 13th st., Detroit, Mich.
Wilson & Hendrie, Montague, Mich.
Wilson & Roake, 261 Front st., N. Y.
Witherow, James P., New Castle, Pa.
Wood, Tabor & Morse, Eaton, N. Y.
Woodbury Engine Co., 254 Mill st., Rochester, N. Y.
Woodsum Machine Co., Dayton, Ohio.
Woodward, M. A., 83 Centre st., N. Y.
Wormes, G. S. & Sons, 36 W. Monroe st., Chicago, Ill.
Worthington, Henry R., 70 Kilby st., Boston, Mass. **89.**
Wright, Hugh & Co., New Lisbon, O.
Wright, L. Jr., 9-11 Alling st., Newark, N. J.
Wright, Wm., Newburgh, N. Y.
Wright & Adams Co., Quincy, Ill.
Wyland, G. G., Williamsport, Pa.
Wysor, Haines & Patterson, Muncie, Ind.
Yakey & Byers, Springfield, O.
Yonkers Mfg. Co., Yonkers, N. Y.
Young, J. S., 23 Park Way, Allegheny, Pa.
Young & Thomas, 42 Cortland st., N. Y.
York, S. M., 44 S. Water st., Cleveland, O.
York Mfg. Co., York, Pa.

Engines—Steam Steering.

Providence Steam Engine Co., Providence, R. I.

Engines—Traction.

Gaar, Scott & Co., Richmond, Ind.

Engines—Water Works.

Dean Steam Pump Co., Holyoke, Mass.
Worthington, Henry R., 88 Liberty st., N. Y. **89.**
Wright, William, Newburgh, N. Y.

Engines—Yacht.

Brown, F. S. & G. L., Fort av., Balt., Md.
Fox, Charles, Stamford, Conn.
Greenfield Steam Engine Works, East Newark, N. J.
Jones & Hitchings, Portland, Me.
Webb & Watson, 17 Border st., E. Boston, Mass.

Engines—Plates.

Seebeck Bros., 19 Ann st., N. Y.
Simonds, A. A., Dayton, O.

Engineers—Civil.

Ackley, J. M., 13 Public sq., Cleveland, O.
Adams, E. P., 19 Exchange pl., Boston, Mass.
Aid, F. J., Columbus, O.
Alhardt, G. F., 418 California st., San Francisco, Cal.
Altman, J., Huntington, Ind.
Am. Society of Civil Engineers, 127 E. 23d st., N. Y.
Amweg, F. J., 2914 Market st., Phila., Pa.
Anderson, C. L., 419 California st., San Francisco, Cal.
Anderson & Bar, 240 11th st., Jersey City, N. J.
Anderson & Hobby, 68 Johnson Buildings, Cincinnati, O.
Anspach, F. J., 907 Filbert st., Phila., Pa.
Appleton, E., Sears Bldg., Boston, Mass.
Aspinwall & Lincoln, 12 Pearl st., Boston, Mass.
Aulman Engine Works, Des Moines, Ia.
Babcock, S. E., Pawling av., Troy, N. Y.
Bachtell, S., 45 Wiggins Blk., Cincinnati, O.
Bacon, James B., 484 Willis av., N. Y.
Bacot, Wm. S., 145 B'way, N. Y.
Baldwin, J. S., 810 Broad st., Newark, N. J.
Balistier, J. N., Jr., Brattleboro', Vt.
Bapst, F. L., City Assessors' Office, Buffalo, N. Y.
Barber, C. M., 9 Wick Blk., Cleveland, O.
Barker, W. P., Birmingham, Ala.
Barrett, Nathan F., 39 Nassau st., N. Y.
Barry, John F. & Co., 2 Nassau st., N. Y.
Bartlett, Hayward & Co., Pratt & Scott sts., Baltimore, Md.
Barnes, Oliver W., 57 B'way, N. Y.
Bassett & Nute, 784 Broad st., Newark, N. Y.
Bates, J. Walker, 6 Wall st., N. Y.
Battin, S. S., 354 Mt. Prospect av., Newark, N. J.
Beckwith, L. F., 261 B'way, N. Y.
Beemer, J. N., Columbus, O.
Bell, G. N., 427 Walnut st., Phila., Pa.
Bement, S. & A. T., Toledo, O.
Benson, J. A., 507 Montgomery st., San Francisco, Cal.
Bentley, H. A., Newport, R. I.
Berdan, N. L., 750 Montgomery st., San Francisco, Cal.
Bergholz, Wm. R., 15 Cortlandt st., N. Y.
Bingham, R. H., City Hall, Albany, N. Y.
Binkerd, J. S., Dayton, O.
Birkinbine, J., 25 N. Juniper st., Phila., Pa.
Bishop, C. D., 769 Republic st., Cleveland, O.
Bishop, F. A., 640 Market st., San Francisco, Cal.
Bitner, J. R., Columbus, O.
Blanchard, A. G., Wash'n av., New Orleans, La.
Bodette, G. H., Toledo, O.
Bogart, J. P., 890 Chapel st., New Haven, Conn.
Bogart, John, 127 E. 23d st., N. Y.
Bolton, E. D., 60 Devonshire st., Boston, Mass.
Bonner, W., 44 Court st., B'klyn, N. Y.
Borie, H. J., 407 California st., San Francisco, Cal.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Botticher, O., Jr., 198 Plane st., Newark, N. J.
Bowditch, Ernest W., 57 B'way, N. Y.; 60 Devonshire st., Boston, Mass.
Bowen, B. F., Columbus, O.
Bouscaren, G., Cincinnati, O.
Boyd, N. C., 60 W. 4th st., Cincinnati, O.,
Bradford, W., 152 Dudley st., Boston, Mass.
Bradley, W. H., 53 Devonshire st., Boston, Mass.
Brady, E. L., 53 Broadway, N. Y.
Bramley, G. W. & Co., 120 N. 7th st., Phila., Pa.
Breakell, Wm. T., 76 John st., N. Y.
Breck, C. E. C., 85 Devonshire st., Boston, Mass.
Brewer, Frank, 44 B'way, N. Y.
Bridges, L., 702 Market st., San Francisco, Cal.
Briggs, L. & Co., 79 Milk st., Boston, Mass.
Brooks, F., 31 Milk st., Boston, Mass.
Brown, C. O., Danbury, Conn.; 18 B'way, N. Y.
Brown, John D., 102 S. 5th av., N. Y.
Brown, J. F., 31 Public sq., Cleveland, O.
Brown, J. R., Frankfort, Ind.
Browne, J. R., Columbus, Ga.
Buck, Leffert L., 18 B'way, N. Y.
Buck & McNulty, 53 Broadway, N. Y.

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Bunce, C. H., 300 Main st., Hartford, Conn.
Burke, M. D., 45 Wiggins Blk., Cincinnati, O.
Burlingame, E. H., 56 Weybosset st., Providence, R. I.
Burns & Huckstep, Lebanon, Ind.
Bussell, Chas. E., 312 S. Barstow st, Eau Claire, Wis. 47.
Burt, L. W., 10 Avon st., Hartford, Conn.
Butler, S., 87 Church st., New Haven, Conn.
Cahill, E. J., 316 California st., San Francisco, Cal.
Caldwell, Richard B., 35 B'way, N. Y.
Canda, Ferdinand E., 11 Pine st., N. Y.
Capron, J. W., Attleboro', Mass.
Carey, J. F., 361 Fulton st., Brooklyn, N. Y.
Carpenter, G. W., 61 State st., Albany, N. Y.
Carter, E., 93 Bruen st., Newark, N. J.
Cartter, M. S. & Co., B'way and Locust st., St. Louis, Mo.
Cassin, I. S., 1404 N. 12th st., Phila., Pa.
Castro, L., 511 Montgomery st., San Francisco, Cal.
Caswell, L. B., Athol, Mass.
Chamber, G. W. & Co., Des Moines, Ia.
Chapman, W. D., Akron, O.
Charles, D. G., 146 Exchange st., Buffalo, N. Y.
Chase, C. F., 65 Westminster st., Providence, R. I.
Cheney, James E., City Hall, Boston, Mass.
Childe, C. B., Gilbert av., Cincinnati, O.
Chittenden Bros., 69 Corcoran Bldg., Washington, D. C.
Clark, G. H., Brattleboro', Vt.
Clarke, Thos. C., 18 B'way, N. Y.
Clement, L. M., 4th, c. Townsend st., San Francisco, Cal.
Cluss & Schultze, 25 Corcoran Bldg., Washington, D. C.
Coats, W. G., 36 Liberty st., Newark, N. J.
Cofrode & Saylor, 257 S. 4th st., Phila., Pa.
Cole, J. A., 69 Ashland Blk., Chicago, Ill.
Collingwood, F., 82 Fulton st., N. Y.
Colvin, V., Western av., n. Perry st., Albany, N. Y.
Condict, J. E., 318 California st., San Francisco, Cal.
Conolly, R. A., 26 Metropolitan Blk., Chicago, Ill.
Constable Bros, 149 B'way, N. Y.
Constable, C., 46 Exchange pl., N. Y.
Cook, F. S., 216 Stewart Bldg., N. Y.
Cook, J. D., Toledo, O.
Cook, J. F. & C. B., Chillicothe, O.
Coolidge, W. G. & Co., Chicago, Ill.
Cooper, Theodore, 35 B'way, N. Y.
Cotton, J. P., Newport, R. I.
Crafts & Forbes, 101 Milk st.,, Boston, Mass.
Crider, T. E., Hamilton, O.
Croes, J James R., 40 Wall st., N. Y.
Crollard, J., 126 Kearney st., San Francisco, Cal.
Crook, C., 200 Joralemon st., Brooklyn, N. Y.
Cruser, V. D., 46 Cortlandt st., N. Y.
Culley, J. L., 40 Blackstone Bldg., Cleveland, O.
Culver, Delos E., 146 B'way, N. Y.
Culver, J. Y., Potter Bldg., N. Y.
Culver, Wm. C., 146 B'way, N. Y.
Culyer, John Y., 88 Park Row, N. Y.
Cunningham, R. A., Columbus, O.
Cunningham, W. S., Marion O.
Curley, W. & L. E., Troy, N. Y.
Curtis, J. H., 85 Devonshire st., Boston, Mass.
Cushing, S. B. & Co., 21 S. Main st., Providence, R. I.
Cushman, Geo. M., 522 W. 153d st., N. Y.
Dager, J. H., 24 E. Chelten av., Phila., Pa.
Darley, E. C., 322 Pine st. (Room 29), St. Louis, Mo.
Darling, Oscar, 44 B'way, N. Y.
Darlington, John H., 33 Pine st., N. Y.
D'Auria, L., 1125 Girard st., Phila., Pa.
Davey, M., 11 Austin Bldg., Buffalo, N. Y.
Davies, T., Purcell av., Cincinnati, O.
Davis, C. B., 187 La Salle st., Chicago, Ill.
Davis, E. A. & Son, Amherst, Mass.
Davis, T. W., City Surveyor, Boston, Mass.
Davison, H. J., 2 Wall st., N. Y.
Dawley, E. P., Depot, Exchange pl., Providence, R. I.
Delcalvo, Francis B., 33 B'way, N. Y.
Dennington, F. C., 16 Court st., B'klyn, N. Y.
Dennis, J. H., Indianapolis, Ind.
Dennison, L. B., Delaware, O.
Dennison, W. C., Delaware, O.
Dercum, O., 274 Sibley st., Cleveland, O.
Detroit Bridge & Iron Works, Detroit, Mich.
Deverall, Edwin R., 58 Dey st., N. Y.
Devereux & Dunn, Germantown, av., n. Evergreen av., Phila., Pa.
Dickenson, P. P., 7 Nassau st., N. Y.
Dickson, S. R., 2 Wall st., N. Y.
D'Invilliers, E. V., 711 Walnut st., Phila., Pa.
Ditto, J. A., City Engineer's Office, Buffalo, N. Y.
Doane, L. W., Zanesville, O.
Doane, T., 21 City sq., Charlestown, Mass.
Dodge, Robert J., 63 Fulton st., N. Y.
Doerflinger & Lacy, 24 State st., N. Y.
Domer, G. W., 607 Louisiana av., Wash'n, D. C.
Donnelly, W. E., Masonic Temple, Cleveland, O.
Douglas, M. J., Springfield, O.
Dragget, S., No. Attleboro', Mass.
Drake, C. W., 11 Sagmore st., Boston, Mass.
Drake, T., 248 Main st., Hartford, Conn.
Draper, T. W. N., 112 Liberty st., N. Y.
Duncklee, J. B., 912 French st., Wash'n, D. C.
Dunham & Paine, 39 City Hall, Cleveland, O.
Earnshaw, J., 4th, c. Race st., Cincinnati, O.
Eaton, G. C., Delaware, O.
Eddy, L. D., 109 3d st., Troy, N. Y.
Eddy, R. H., 76 State st., Boston, Mass.
Egerton, W. S., 27 Dove st., Albany, N. Y.
Eisenmann, J., 44 Euclid av., Cleveland, O.
Elseffer, Wm. L., 18 B'way, N. Y.
Eltenhead, A. L., 2136 Arch st., Phila., Pa.
Emery, Chas. E., 22 Cortlandt st, N. Y.
Emslie, P., 174 Pearl st., Buffalo, N. Y.
Erwin, J. W., Hamilton, O.
Erwood, John, 125 S. Clinton st., Chicago, Ill.
Evans, C. A., 1725 Park av., Phila., Pa.
Faber, du, F. A., 22 Nichols st., Newark, N. J.
Farnham, R. E., 234 La Salle st., Chicago, Ill.
Fatout, H. B., Indianapolis, Ind.
Fields, S., 562 Ellicott st., Buffalo, N. Y.
Findlay, A., 31 Pine st., N. Y.
Finley, D. & Co., 10 California st., San Francisco, Cal.
Fisher, L. F., Akron, O.
Fisher, O., 33 Westminster st., Providence, R. I.
Flannery, J., 216 S. 3d st., Phila., Pa.
Foley, C. E., 377 B'way, B'klyn, N. Y.
Fowler & Lummis, 436 Walnut st., Phila., Pa.
Frazer, R., 209 S. 3d st., Phila., Pa.
Freeman, J. E., 104 Mout Block, San Francisco, Cal.
Fritzsche, C. O. H., 35 B'way, N. Y.
Frizzell, J. P., 60 Congress st., Boston, Mass.
Fuller, C. L., 26 City Hall, Troy, N. Y.
Fuller, Eugene F., 11 Wall st., N. Y.
Fuller, J. F., 12 Pearl st., Boston, Mass.
Futton, C. H., Swan, c. Main st., Buffalo, N. Y.
Grant, S. C., 416 N. 6th st., Phila., Pa.
Garbett & Wood, 2380 Washt'n st., Boston, Mass.
Gardner, O. N., Akron, O.
Gatchell, C. A. & Co., 223 Main st., Buffalo, N. Y.
Gatzmer, W. C., 132 S. Delaware av., Phila., Pa.
Gaynor, J. P., 309 California st., San Francisco, Cal.
Geer, H. M., 5 Mansion House Blk., Troy, N. Y.
Genung, C. C., Evansville, Ind.
Gerhard, Wm. Paul, 39 Union sq., N. Y.
Geyelin, E., 400 Chestnut st., Phila., Pa.
Gibbes, C. D., 118 Montgomery Blk., San Francisco, Cal.
Gibbes, J. T., 102 Montgomery Blk., San Francisco, Cal.
Gilchrist, J., Wheeling, W. Va.
Gilstrap, A. L., Macon, Miss.
Glacier, H., 11 Linden st., Hartford, Conn.
Goddard, G. H., 529 Golden Gate av., San Francisco, Cal.
Goge, Alexander M., 176 B'way, N. Y.
Goodfellow, J. T., 31 Boardman Bldg., Troy, N. Y.
Goodwin, J. O., Arlington, Mass.
Gordon, Strobel & Laureau (Ltd.), 226 Walnut st., Phila., Pa.
Gottlieb A. & Co., 149 La Salle st., Chicago, Ill.
Graff, Christian, 788 B'way, N. Y.

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Gray, A. F., 36 Emery Arcade, Cincinnati, O.
Gray, S. M., City Hall, Providence, R. I.
Greene, D. M., 41 1st st., Troy, N. Y.
Greene, R. W., 14 Westminster st., Providence, R. I.
Gridley, G. M., Springfield, O.
Grimshaw, R. F., 420 Walnut st., Phila., Pa.
Gruninger, Otto, 66¼ Pine st., N. Y.
Gunnell, Wm. C., 99 Nassau st., N. Y.
Haines, W. S., 18 S. Main st., Providence, R. I.
Hale, A. W., 1 Broadway, N. Y.
Hammatt, E. A. W., 5 Pemberton sq., Boston, Mass.
Hardaway, R. A., Tuscaloosa, Ala.
Harkness, W. J., 324 Walnut st., Phila., Pa.
Harris, C., 101 Milk st., Boston, Mass.
Harris, G. W., Terra Haute, Ind.
Harris, Robt., L., 1 B'way, N. Y.
Harris, T., Anderson, Ind.
Harris, T. William & Co., 44 B'way, N. Y. 79.
Harris, T. W., 19 Exchange pl., Boston, Mass.
Harrison & Nepper, 4th, c. Vine st., Cincinnati, O.
Harrod, B. M., 122 Common st., New Orleans, La.
Hartnell, G. E., 391 Pearl st., Cleveland, O.
Haswell, C. H., 29 B'way, N. Y.
Haven, W. A., 221 Main st., Buffalo, N. Y.
Hebard, G., 847 Prospect av., Buffalo, N. Y.
Henson, W. S., 566 Orange st., Newark, N. J.
Herold, J., 932 N. 11th st., Phila., Pa.
Hersey, F. M., 60 Devonshire st., Boston, Mass.
Hexamer, E. & Son, 419 Walnut st., Phila., Pa.
Heylmun, J. W , 17 Court st., Buffalo, N. Y.
Heynemann, L., 113 Pine st., San Francisco, Cal.
Hicks, C. A. 5 Pemberton sq., Boston, Mass.
Hiller, J., Dayton, O.
Hines, G. A., Brattleboro', Vt.
Hitchcock, B. H., Toledo, O.
Hodges, A., 19 Exchange pl., Boston, Mass.
Hogan, P., 551 Broadway, Albany, N. Y.
Hogue, J. S., Charlestown, W. Va.
Holmes, A. J., 318 Pine st., San Francisco, Cal.
Hopkins, G. M., 320 Walnut st., Phila., Pa.
Hovack, Chas. L., 93 Nassau st., N. Y.
Hosbrook, J. A. (County Surveyor), Cincinnati, Ohio.
Hosea, R. M., 65 Johnston Bldgs., Cincinnati, O.
Housman, C. V., 1319 Ellis st., San Francisco, Cal.
Hovey, H. C., Ayer, Mass.
Howe, J., 70 Weybossett st., Providence, R. I.
Howell, F., Zanesville, O.
Howland, A. H., 12 West st., Boston, Mass.
Huerne & Everett, 41 Thurlow Blk., San Francisco, Cal.
Hufnagel, Bernard, 75 Cotton Exch., N. Y.
Hull & Palmer, Water st., c. Fairfield av., Bridgeport, Conn.
Hutton, Wm. R., 35 B'way, N. Y.
Innis, G. S., Columbus, O.
Jeffries, T. E., Charlestown, W. Va.
Jenks, L. H., 901 Walnut st., Phila., Pa.
Jones, J. E., Bartlett's Bldg. (J. P.), Boston, Mass.
Jones, Frank F., 2 Wall st., N. Y.
Jones, W. C., 2 S. Water st., Cleveland, O.
Jones & Benner Co. (The), 218 S. 4th st., Phila., Pa.
Jonte, P. N., 22 W. Court st., Cincinnati, O.
Joslin, W., 140 Seneca st., Cleveland, O.
Judson & Brodbeck, Council Bluffs, Ia.
Just, Geo. A., 315 E. 28th st., N. Y.
Kellogg, C. H., 378 Main st., Buffalo, N. Y.
Kellogg, H. J., 63 Bank st., Waterbury, Conn.
Kelly W., 366 W. Broadway, Boston, Mass.
Kennedy, A. B. W., Mobile, Ala.
Keokuk Wind Engine Co., Keokuk, Ia.
Ketcham, G. H., Toledo, O.
King, T. S., 1 Broadway, N. Y.
Kinnear, J., Columbus, O.
Kizer, J., Springfield, O.
Kizer, T., Springfield, O.
Kluegel, C. H., 418 California st., San Francisco, Cal.
Knapp, L. H., City and County Hall, Buffalo, N. Y.
Knight, C. R., Akron, O.
Knight & Bontecou, Kansas City, Mo.
Krause, F. L., 21 Public sq., Cleveland, O.
Kuhlmann, J. P. F., 223 Phelan Bldg., San Francisco, Cal.
Laforge, F. W., 63 Bank st., Waterbury, Conn.
Lancaster, James H., 187 B'way, N. Y. 4.
Lane, James C., 1286 B'way, N. Y.; 46 4th st., B'klyn, N. Y.
Lang, J. C., 614 F st., Washington, D. C.
Lang, J. P. T., 1124 12th st., Washington, D. C.
Langworthy, Leslie, P., 34 Custom House, Providence, R. I.
Latham, H. H., 42 Dearborn st., Chicago, Ill.
Latham, J. A., 14 Westminster st., Providence, R. I.
Latimer, C., 30 Euclid av., Cleveland, O.
Lawton, W. H., Jr., Newport, R. I.
Layman, E. F., 49 W. 3d st., Cincinnati, O.
Lean & Blair, Penn. Bldg., Pittsburgh, Pa.
Le Comte, L. J., 533 Kearny st., San Francisco, Cal.
Leeds, Lewis W., 62 Broad st., N. Y.
Lehlbach Bros., 770 Broad st., Newark, N. J.
Lehman, A. E., 711 Walnut st., Phila., Pa.
Lewinson, M., 128 B'way, N. Y.
Lewis, F. A., 413 Walnut st., Phila., Pa.
Lightall, A. H., 1013 Treat av., San Francisco, Cal.
Linton, H., 906 Walnut st., Phila., Pa.
Lockwood, J., 52 B'way, N. Y.
Loeper & Reed, Indianapolis, Ind.
Long, Thomas J., 44 B'way, N. Y.
Loomis, H. G., 114 Pearl st., Hartford, Conn.
Loretz, A. J. L., 371 Fulton st., B'klyn, N. Y.
Loth, C. E., 88 Congress st., Troy, N. Y.
Low, W. H., 30 N. Pearl st., Albany, N. Y.
Lucius, Albert, 71 B'way, N. Y.
Ludwig, H., 29 Euclid av., Cleveland, O.
Luther, W. J., Attleboro, Mass.
Lutz, U. S., 427 Walnut st., Phila., Pa.
Lyman, M., Rutland, Vt.
Lyon, H. L., 348 Main st., Buffalo, N. Y.
Lyon, C. G., 348 Main st., Buffalo, N. Y.
Maclay & Davies, 120 and 697 B'way, N. Y.
McAlpine, Wm. J., 75 Cotton Ex., N. Y.
McClure & Schuler, Bissell Block, Pittsb'gh, Pa.
McDermot, M., 2573 Emerald av., Chicago, Ill.
McElroy, Samuel, 50 Johnson st., B'klyn, N. Y.; 170 B'way, N. Y.
McElroy, S. H., 16 Court st., B'klyn, N. Y.
McLain, Louis, Sanford, Fla.
McLean, J. J., 170 B'way, N. Y.
McNulty, Geo. W., 53 B'way, N. Y.
Magovern, Edw. A., 22 Cortlandt st., N. Y.
Mallory, Geo. B., 55 B'way, N. Y.
Malter, Lind & Co., 419 California st., San Francisco., Cal.
Mann, G. E., 302 Main st., Buffalo, N. Y.
Mansfield, A. K. & Co., 280 B'way, N. Y.
Manson, M., 10 California st., San Francisco, Cal.
Marston, J. B., Toledo, O.
Martin, Frank S., 15 William st., N. Y.
Matthesius, A. H., 38 Court st., B'klyn, N. Y.
Mauran, J. R., 610 Commercial st., San Francisco, Cal.
Meeks, Frederick L., 30 Vesey st., N. Y.
Mellis, D. E., 509 Montgomery st, San Francisco, Cal.
Mercer, J., 1845 Frankford av., Phila., Pa.
Merchant, C. C., 97¼ Ontario st., Cleveland, O.
Meissner, G. C. Jr., Toledo, O.
Messerole, W. M., Sheffield av., n. Fulton av., B'klyn, N. Y.
Miller, J. A. & Co., 25 Butler Exchange, Providence, R. I.
Miller, J. R., Toledo, O.
Minot, S. L., 7 Exchange pl., Boston, Mass.
Moffett, Hodgkins & Clarke, Watertown, N. Y.
Minto, W., 417 Kearney st., San Francisco, Cal.
Molera, E. J., 850 Van Ness av., San Francisco, Cal.
Moore, R., 215 Chestnut st., St. Louis, Mo.
Morgan, G. C., 149 La Salle st., Chicago, Ill.
Morgan, T. W. M., 145 B'way, N. Y.
Morrison, R. I., New Castle, Ind.
Morrison, W. H., Indianapolis, Ind.

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Moses, T. B., Dale, n. Poplar st., W. Roxbury, Mass.
Muller, M., 97 Market st., Newark, N. J.
Murphy, H., 326 Walnut st., Phila., Pa.
Namur, Auguste, 35 B'way, N. Y.
Neftel & Oothout, 41 Liberty st., N. Y.
Nock, G. W. & Co., 1714 Moyamensing av., Phila., Pa.
Nott, G. H., 204 Dearborn st., Chicago, Ill.
Nudd, Chas. & Co., 65 Westminster st., Providence, R. I.
Ogden & Wright, 61 State st., Albany, N. Y.
O'Hara, J. J., 39 Tweddle B'ldg., Albany, N. Y.
Olmstead, B. S. & G. S., 32 Liberty st., N. Y.
Onderdonk, A., 204 Montgomery st., San Francisco, Cal.
Osborne & Son, Richard B., 407 Walnut st., Phila., Pa.
Osgood Dredge Co., 37 State st., Albany, N. Y.
Osmer, W. A., Logansport, Ind.
Owen, Frederick N., 13 William st., N. Y.
Owen, J., 721 Broad st., Newark, N. J.
Paine, C. E., 13 Market sq., Providence, R. I.
Palliser, Palliser & Co., 328 Main st., Bridgeport, Conn.
Palmer, N. G., Atlantic, c. Wyckoff avs., B'klyn, N. Y.
Parker, F. M., Bloomfield, Ind.
Parks, C. F., 76 State st., Boston, Mass.
Parsons, Wm. B., 35 B'way, N. Y.
Patterson, James W., 240 B'way, N. Y.
Paul Bros., Akron, O.
Pearson, C. A., 21 City sq., Charlestown, Mass.
Pegram, Geo. H., 18 B'way, N. Y.
Pendleton, J. H., 601 Hamburg st., B'klyn, N. Y.
Penfield, D. G., Danbury, Conn.
Perkins, S., City Hall, Boston, Mass.
Perrin, Z., Connersville, Ind.
Peterson, W. B., Wheeling, W. Va.
Philadelphia Bridge Works (The), 257 S. 4th st., Phila., Pa.
Philbrick, E. S., 12 West st., Boston, Mass.
Phillips, H., Dayton, O.
Phillips, J. H., 11 West 8th st., Cincinnati, O.
Phœnixville Bridge Works, 410 Walnut st., Phila., Pa.; 49 William st., N. Y.
Picard, Fred. J., Columbus, O.
Pille, L. H., Exchange pl., New Orleans, La.
Pitzman, J., 615 Chestnut st., St. Louis, Mo.
Plimpton, A. L., 16 Kilby st., Boston, Mass.
Poett, A., 116 Montgomery st., San Francisco, Cal.
Post & McCord, 102 B'way, N. Y.
Pratt, J. H., 89½ St. Clair st., Cleveland, O.
Preuss, Wm., 307 E. 10th st., N. Y.
Prichard, Henry S., 316 Walnut st., Phila, Pa.
Pruyn, A., 68 S. Swan st., Albany, N. Y.
Purdy, C., 68 Centre, st., Cleveland, O.
Putnam, C. S., 66 Nucleus House, San Francisco, Cal.
Putnam & Tobias, 190 Common st., New Orleans, La.
Randall, J. J. R., Rutland, Vt.
Randall, P. M., 533 Sacramento st., San Francisco, Cal.
Randolph, John C. F., 35 B'way, N. Y.
Raney, C. H., 110 S. 4th st., Phila., Pa.
Rays, L. E., Rutland, Vt.
Read, R. L., 49 W. 3d st., Cincinnati, O.
Rice, L. F., 4 Pemberton sq., Boston, Mass.
Risse, Louis A., 2629 3d av., N. Y.
Ritchie, J., 44 Euclid av., Cleveland, O.
Roberts, P. B., 141 B'way, N. Y.
Robinson, E. N., 320 Sansome st., San Francisco, Cal.
Robinson, S., 320 Sansome st., San Francisco, Cal.
Root, Geo. M., 17 B'way, N. Y.
Rosenstok, H. E., Montgomery, Ala.
Ross, D. M. N., Mobile, Ala.
Ross & Sanford, Jersey City, N. J.
Rotch, W., 8 Exchange pl., Boston, Mass.
Rubenstein, R., Mobile, Ala.
Rushing, Jos. L., 137 B'way, N. Y.
Rusling, G. M., 137 B'way, N. Y.
Russell & Thayer, 4 S. Broad st., Phila., Pa.
Rutherfoord, John W., 145 B'way, N. Y.
Salkeld & Eckart, 217 Sansome st., San Francisco, Cal.
Sanford, D. C., 87 Church st., New Haven, Conn.
Saunders, J. D., Evansville, Ind.
Sawyer, E., 60 Congress st., Boston, Mass.
Sayles, C. F., Adams, Mass.
Scarlett & Scarlett, 802 Broad st., Newark, N. J.
Schaeffer, J. S., 777 Broad st., Newark, N. J.
Schermerhorn, L. Y., 1125 Girard st., Phila., Pa.
Schneider, C. C., 35 B'way, N. Y.
Scofield & Starr, 444 Main st., Bridgeport, Conn.
Scott, A. M., Charlestown, W. Va.
Schubarth, N. B., 25 Weybossett st., Providence, R. I.
Schuyler, John, 63 William st., N. Y.
Schuyler, J. D., 318 Pine st., San Francisco, Cal.
Searle, S. W., 82 Church st., New Haven, Conn.
Searles, Wm. H., Merchants Bk. Bldg., Cleveland, O.
Serrell, Edw. W., 38 Wall st., N. Y.
Sears, W. H., 35 Congress st., Boston, Mass.
Seymour, S., 20 Nassau st., N. Y.
Sharon, W., Springfield, O.
Shaw, Edward S., 3 Pemberton sq., Boston, Mass.
Shea, J. W., Wabash, Ind.
Shedaker, S. K., 1711 Christian st., Phila., Pa.
Shedd, J. Herbert, 65 Westminster st., Providence, R. I.
Shedd, J. H., 60 Congress st., Boston, Mass.
Sherman & Rogers, 404 Main st., Buffalo, N. Y.
Short, L. H., 120 Sutter st., San Francisco, Cal.
Shoup, Sam. B., Dayton, O.
Shunk, Wm. F., 26 Court st., B'klyn, N. Y.
Shunk & Bryson, 1 B'way, N. Y.
Shiffler Bridge Works (The), 47th st. & A. V. R'y, Pittsburgh, Pa.
Siegesmund E., 958 6th st., Buffalo, N. Y.
Simpson, F., Columbus, O.
Slingerland, W. H. & Co., 71 State st., Albany, N. Y.
Smith, C. Shaler, St. Louis, Mo.
Smith, Frederick H., 227 E. German st., Balt., Md.
Smith, W. G., Naugatuck R. R. Depot, Waterbury, Conn.
Smyth, W. H., 258 Market st., San Francisco, Cal.
Sooysmith & Co., 2 Nassau st., N. Y.
Sorzano, Julio F., 33 B'way, N. Y.
Specht, G. T., 418 California st., San Francisco, Cal.
Spengel, Carl, 59 Pike's Opera House, Cincinnati, O.
Spindler, Herman H., 32 Liberty st., N. Y.
Sprigg, J. C., 1424 N. Y. av., Washington, D. C.
Stanley, H. J., 9th st., c. Central av., Cincinnati, O.
Starks, W., Ashborough, Ind.
Starkweather, N., 70 Walnut st., Hartford, Conn.
Stiles, A., 207 S. 5th st., Phila., Pa.
Stone, Frank P., Springfield, O.
Stone, J. E., 101 Milk st., Boston, Mass.
Strobel, C. L., 207 La Salle st., Chicago, Ill.
Stratton, J. L., Toledo, O.
Stuart, Sinclair, 59 Wall st., N. Y.
Study, A. H., Richmond, Ind.
Sundstorm, C. A., 4447 Main st., Phila., Pa.
Sutherland, Mosher A., 121 4th av., N. Y.
Swan, C. H., 25 Waben st., Boston, Mass.
Sweet, A. R., Pawtucket, R. I.
Szen, C., 533 Main st., Buffalo, N. Y.
Tachard, Andrew, 17 B'way, N. Y.
Taggart, A. C., 25 N. Juniper st., Phila., Pa.
Talbot, E. M., Lafayette, Ind.
Tasheira, Lew, 4th, c. Townsend st., San Francisco, Cal.
Thayer & Patterson, 4 S. Broad st., Phila., Pa.
Thor, Walde, W. H., 26 Public sq., Cleveland, O.
Tidd, M. M., 10 Tremont st., Boston, Mass.
Tiedemann, F. C. P., 5 S. B'way, St. Louis, Mo.
Tingley, G. C., 21 S. Main st., Providence, R. I.
Towle, S., 115 B'way, N. Y.
Towle, Theodore M., 26 B'way, N. Y.
Trease Bros., Canton, O.

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Union Bridge Co. (The), 1 B'way, N. Y.
Vaillant, G. A., 631 Walnut st., Phila., Pa.
Van der Naillen, A., 24 Post st., San Francisco, Cal.
Van Harlingen & Mactier, 308 Walnut st., Phila., Pa.
Vanhorne & Jackson, 15 Cortlandt st., N. Y.
Van Nostitz, H., 324 Pacific st., Brooklyn, N. Y.
Van Rosenberg, Leo, 35 B'way, N. Y.
Varney, J. D., New Court House, Cleveland, O.
Vawter, P. C., Lafayette st., Ind.
Viele, Egbert L., & Co., 115 B'way, N. Y.
Voelkel, G. E., 331 Kearney st., San Francisco, Cal.
Vom Berge, G., City & County Hall, Buffalo, N. Y.
Von Borcke, C. S., 2007 O'Bear av., St. Louis, Mo.
Von Leicht, F., 418 California st., San Francisco, Cal.
Von Reizenstein, L., 313 Gasquet st., New Orleans, La.
Von Rosenberg, Leo., 35 B'way, N. Y.
Von Schmidt, A. W., 808 Mont. st., San Francisco, Cal.
Wackenreuder, V., 604 Merchant st., San Francisco, Cal.
Waddell, J. A. L., 118 W. 6th st., Kansas City, Mo.
Wadsworth, A., 50 State st., Boston, Mass.
Wagoner, L., 318 Pine st., San Francisco, Cal.
Waltz, J. E., Dayton, O.
Ward, Lebbens B., 63 Bleecker st., N. Y.
Wardlaw, James, R., 25 Chamber st., N. Y.
Weaver, J. C., Hamilton, O.
Webster, Albert L., 3 Broad st., N. Y.
Webster, C. F., Shelbyville, Ind.
Webster, G. S., 4626 Fkd. av., Phila., Pa.
Wedekind, G. W., 44 Court st., B'klyn, N. Y.
Weld, F. F., 63 Bank st., Waterbury, Conn.
Welton & Bonnett, 83 Bank st., Waterbury, Conn.
Westinghouse, Church Kerr & Co., 17 Cortlandt st., N. Y. **vi. & vii.**
Wetherbee, G. A., 2372 Washington st., Boston, Mass.
Wharton, Wm., Jr., & Co. (Ltd.), Phila., Pa.
Wheeler, W., 75 State st., Boston, Mass.
White, Wm. S., 79 Cedar st., N. Y.
White, Wm. Henry, 32 Pine st., N. Y.
White & Reader, 74 Wall st., N. Y.; Chicago, Ill.
Whiting, F. H., Des Moines, Iowa.
Whitman & Breck, 85 Devonshire st., Boston, Mass.
Whitney, W. H., 39 Court st., Boston, Mass.
Widmayer, Wm. F., 31 Broad st., N. Y.
Wiggs & Bacon Co. (The), Birmingham, Ala.
Wilkes, J. K., Danbury, Conn.
Wilkinson, D. L., Pawtucket, R. I.
Williams, A. D., Anderson, Ind.
Williams, B., 171 La Salle st., Chicago, Ill.
Williams, M. E., Toledo, O.
Williams, N. W., 27 Apsley st., Germantown, Pa.
Williams, W., 3 Carondelet st., New Orleans, La.
Wilson Bros. & Co., 435 Chestnut st., Phila., Pa. **71.**
Wilson, H. W., 190 Dorchester st., Boston, Mass.
Wingate, Chas. F., 119 Pearl st., N. Y.
Wise, R. Z., Canton, O.
Whitbeck, C. G., 12 William st., W. Troy, N. Y.
Wolf, A. H., 218 La Salle st., Chicago, Ill.
Wood, F. D., Brownstown, Ind.
Woodbury, R. A., Pawtucket, R. I.
Woodruff, T. T., 2130 Norris st., Phila., Pa.
Wooster, O., Rutland, Vt.
Worthen, Wm. E., 63 Bleecker st., N. Y.
Wright, L. M., 46 Oakwood av., Troy, N. Y.
Wright, Meysenberg & Co., Phœnix B'ldg, Chicago, Ill.; Bank of Commerce B'ldg, St. Louis, Mo.
Wurtele, A. S. C., 79 Niagara sq., Buffalo, N. Y.
Wyllaumez, M. E., Toledo, O.
York, H. W., 22 Cortlandt st., N. Y.
Young, Robert A., 20 Exchange pl., N. Y.
Youngs, J. S., 125 Broadway, Buffalo, N. Y.
Zabriskie, A. J., 777 Broad st., Newark, N. Y.
Zellweger, J., 163 La Salle st., Chicago, Ill.

Engineers—Consulting and Contracting.

Brady, E. L., 53 Broadway, N. Y.
Laughlin, A. & Co., Cleveland, O.
Lavanderyra Bros., 1 Broadway, N. Y.
Lean & Blair, Pittsb'g, Pa.
McClure & Shuler, Pittsb'g, Pa.
McKenna, Ryan & Sons, Pittsb'g, Pa.
Neftel & Oothout, 41 Liberty st., N. Y.
Roberts, Frank C., Phila., Pa.
Robinson, Wm. H., Phila., Pa.
Smith, Frederick H., 227 E. German st., Balt., Md.
Smith & Laughlin, Pittsb'g, Pa.
Swindell Construction Co., Pittsb'g, Pa.
Waddell J. A. L., 118 W. 6th st., Kansas City, Mo.
Waite, Van Harlingen & Mactier, Phila., Pa.
Westinghouse, Church, Kerr & Co., 17 Cortlandt st., N. Y. **vi. & vii.**
Wilson Bros. & Co., 435 Chestnut st., Phila., Pa. **71.**

Engineers—Electrical.

Cary, Edw. E., 645 High st., Newark, N. J.
Jarvis Engineering Co., 109 Liberty st., N. Y.; Boston and Chicago.
Prescott, Geo. B., Jr., 645 High st., Newark, N. J.
Weston, Edward, 645 High st., Newark, N. J.

Engineers—Hydraulic.

Hill, John W., Glenn Bldg., Cincinnati, O.
Nudd, Carlos & Co., 65 Westminster st., Providence, R. I.
Pierce, G. L., 528 California st., San Francisco, Cal.
Schussler, H., 806 Market st., San Francisco, Cal.
Shedd, J. Herbert, 65 Westminster st., Providence, R. I.
Stockman, J. M., Mission, c. Fremont st., San Francisco, Cal.

Engineers—Mechanical.

Adams & Carter, 109 California st., San Francisco, Cal.
Allen, G. H., Manchester, N. H.
Aller, A., 109 Liberty st., N. Y.
Almqvist, August W., 23 Park Row, N. Y.
American Mfg. Co., St. Paul, Minn.
American Society of Mechanical Engineers, 280 Broadway, N. Y.
American Tool and Machine Co., 84 Kingston st., Boston, Mass.
Atlantic Works, 72 Border st., E. Boston, Mass.
Atwell, R. B., 305 Cortlandt st., Balt., Md.
Bacot & Payne, 47 Montgomery st., Jersey City, N. J.
Baker & Harper, Butte, Mont.
Baldwin, W. J., 82 Fulton st., N. Y.
Bates, W. S., 204 Dearborn st., Chicago, Ill.
Banks, D. B., 211 N. Calvert st., Balt., Md.
Barnard, A. B., 37 Post st., San Francisco, Cal.
Barnes, G. H., 81 Milk st., Boston, Mass.
Barthel, A., 37 Congress st. (W.), Detroit, Mich.
Basshor, T. C. & Co., 30 Light st., Balt., Md.
Becker, J., 7 Beekman st., N. Y.
Beggs, J. & Co., 9 Dey st., N. Y.
Behel, J., Rockford, Ill.
Beyer & Pivy, 21 Newark st., Hoboken, N. J.
Birch, W. H., 119 Beale st., San Francisco, Cal.
Boeklin, R., 26 Church st. (Room 10), N. Y.
Boss, M. P., 309 California st., San Francisco, Cal.
Boyer, Z. P., 430 Walnut st., Phila., Pa.
Branden, J. R., 337 14th st., Detroit, Mich.
Bridgeport Boiler Works, Housatonic R. R., n. Congress st., Bridgeport, Conn.
Brown, E. G., 311 Walnut st., Phila., Pa.
Brown, W. S., 79 Milk st., Boston, Mass.
Brush, C. B., 13 Newark st., Hoboken, N. J.
Buehner, P., St. Paul, Minn.
Bulkley, H. W., 149 B'way, N. Y.
Burley, John, 102 South st., Boston, Mass.
Buswell, W. F., 108 Main st., San Francisco, Cal.

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Cheney, L. L., 505 Chestnut st., Phila., Pa.
Clark, J., & Co., S. Side Basin, Balt., Md.
Clot & Meese, 129 Fremont st., San Francisco, Cal.
Clum, C. S. & Co., 917 Sansom st., Phila., Pa.
Colburn, L., 159 La Salle st., Chicago, Ill.
Collian, Victor, 287 Jefferson av., Detroit, Mich. 70.
Conde, C. A., 1129 Cherry st., Phila., Pa.
Connecticut Patent Water Pipe Co., 78 Crown st., New Haven, Conn.
Cooper, Theodore, 35 B'way, N. Y.
Copeland, C. W., 24 Park pl., N. Y.
Corwin, W. S., 777 Broad st., Newark, N. J.
Cowles, Wm., 45 B'way, N. Y.
Crane & Miller, 793 Broad st., Newark, N. J.
Cramer & Yerbury, Rock Island, Ill.
Craven, T. C., 406 B'way, Albany, N. Y.
Cramp, W. & Sons, Beach, n. Norris st., Phila., Pa.
Croskey, K., 260 S. 5th st., Phila., Pa.
Cruickshank, Geo. M., 280-286 Dyer st., Providence, R. I.
Cruser, V. D., 46 Cortlandt st., N. Y.
Cummings, G. & Co., 18-20 Fell st., San Francisco, Cal.
Curtiss, W. E., 1425 Filbert st., Phila., Pa.
Daily, M. J., 86 Meadow st., Waterbury Conn.
Dale, J. H., 1361 Ridge av., Phila., Pa.
Dammerall, J. W., 94 High st., Boston, Mass.
Dare, B. A., 36 Dey st., N. Y.
Dayer, J. H., Wilmington, Del.
Deacon, W., 131 Main st., San Francisco, Cal.
De Beauvais, Jules, 2 Howard st., N. Y.
Dent, E. L. & Co., 1331 F st., Washington, D. C.
DeKinder, J. J., 901 Walnut st., Phila., Pa.
DeLacy, W. W., Helena, Mont.
Dietrich, C. F., 29 W. Baltimore st., Balt., Md.
Doolittle, G., 88 John st., Bridgeport, Conn.
Douglass, S. W., 15 Cortlandt st., N. Y.
Earle, F. H., 256 Washington st., Jersey City, N. J.
Ellacott, J. B., 194 Madison st., Chicago, Ill.
Eichling, H., 5 Beekman st., N. Y.
Emerson, C. E., Nashua, N. H.
Evans, T., 65 Westminster st., Providence, R. I.
Faber du Faur, A., 22 Nichols st., Newark, N. J.
Fanning, J. T., Minneapolis, Minn.
Feister, H. P., 420 Library st., Phila., Pa.
Fish, J., 164 Maiden la., N. Y.
Flinn, G. P., 420 Library st., Phila., Pa.
Foss & Merrill, Concord, N. H.
Foss & Patterson, Minneapolis, Minn.
French, A. F., Keene, N. H.
Foskett & Bishop, 402 State st., New Haven, Conn,
Gadsen & Co., 19 Whitehall st., N. Y.
Galloupe, F. E., 30 Kilby st., Boston, Mass.
Garcin & Son, 294 Howard st., San Francisco, Cal.
Garretson, S. W., 419 California st., San Francisco, Cal.
Gatzmer, W. C., 132 S. Delaware av., Phila., Pa.
Gaunt & Martinez, 115 B'way, N. Y.
Gill, J. L., Jr., 108 S. 6th st., Phila., Pa,
Goubert, A. A., 18 Cortlandt st., N. Y.
Gray, 148 William st., N. Y.
Greacen, S. B., Perth Amboy, N. J.
Greenfield, W. G. & G., 400 N. 5th st., E. Newark, N. J.
Hadley, B. H., Beverly, c. Mason st., Providence, R. I.
Haig, A., 1018 Chestnut st., Phila., Pa.
Hall & Makepeace, Butler Exchange, Providence, R. I.
Handren & Robbins, 126 Washington st., N. Y.
Haugh, J., 206, Walnut pl., Phila., Pa.
Hawkins, W., 52 M. & E. R. R. av., Newark, N. J.
Hayes, John J., Kent, c. West st., B'klyn, N. Y.
Heath & Chaplin, 30 Asylum st., Hartford, Conn.
Henderer, A. L., Wilmington, Del.
Henning, G. C., 18 Cedar st., N. Y.
Herman, L., 29 Euclid av., Cleveland, O.
Herrick, N. R., 531 California st., San Francisco, Cal.
Hill, C. C., 84 Market st., Chicago, Ill.
Hill, John W., Glenn Bldg., Cincinnati, O.
Hoff, O., Minneapolis, Minn.
Holmes & Blanchard, 37 Charlestown st., Boston, Mass
Hovey, E. H., 103 Adams st., Chicago, Ill.
Howe, W. F., 50 S. Clinton st., Chicago, Ill.
Howe & Chandler, 30 Kilby st., Boston, Mass.
Howell, E. I. H., 51 N. 7th st., Phila., Pa.
Hoyte, R. O., Pine Ridge, Dak.
Hudnutt & Gallaher, Helena, Mont.
Insley, E. W., 259 Washington st., Jersey City, N. J.
Jarvis Engineering Co., 61 Oliver st., Boston, Mass.
Jenks, B. H., 319 Willings la., Phila., Pa.
Kerr, W. J., 925 Market st., Phila., Pa.
Kinslow, A. G., St. Paul, Minn.
Kirby, J. W., 125 N 4th st., Phila., Pa.
Knight, A. B., Virginia City, Mont.
Koefoed, C., 115 1st st., San Francisco, Cal.
Krajewski & Pesant, 35 Broadway, N. Y.
Krom, Stephen R., 151 Cedar st., N. Y.
Lancaster, J. H., 187 Broadway, N. Y. 4.
Leonard, H. R., 19 Merch. Exch., San Francisco, Cal.
Le Van Barnett, 3007 Baring st., Phila., Pa.
Lockhead, J., 222 Stewart st., San Francisco, Cal.
Lockwood, Greene & Co., 65 Westminster st., Providence, R. I.
Lotz, W. H., 68 Metropolitan Blk., Chicago, Ill.
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Lyon, D. A., 358 Franklin st., Chicago, Ill.
McClintock, J. N., Concord, N. H.
McFarland, W., 890 Chapel st., New Haven, Conn.
McIntyre, J. C., Helena, Mont.
McLauthlin, Geo., T. & Co., 120 Fulton st., Boston, Mass.
Mahony, J. & Son, 245 B'way, N. Y.
Maltby, F. D., 303 7th st., Washington, D. C.
Malter, Lind & Co., 419 California st., San Francisco, Cal.
Mansfield, A. K., 177 La Salle st., Chicago, Ill.
Milliken, W. A., 22 California st., San Francisco, Cal.
Miller, J. H., Sioux Falls, Dak.
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Morris, H. G., 209 S. 3d st., Phila., Pa.
O'Connor, Jno. F. K., 38 Park Row, N. Y.
Oppenheim, E. C., 34 Thomas st., N. Y.
Otterson, J. P. S., Bennington, N. H.
Painter, W., 200 N. Holliday st., Balt., Md.
Parker, H. F., 5 Beekman st., N. Y.
Parsons, H. de B., 35 B'way, N. Y.
Pearson, G. B., Nashua, N. H.
Peirce, M. P., 44 N. 4th st., Phila., Pa.
Pfauts, D. M., 1715 Cayuga st., Phila., Pa.
Pickering, W. H. & Co., 108 Commerce st., Hartford, Conn.
Pierce, G. L., 45 Merchants Ex., San Francisco, Cal.
Pond Engineering Co., 709 Market st., St. Louis, Mo.
Pool & Hunt, 233 E. German st., Balt., Md.
Post, Jr., John & Co., 70 Kilby st., Boston, Mass.
Raettig, C., 20 Church st., N. Y.
Ralph, T. W., Laurel, Del.
Ramsay, H. A. & Son, ft. Allen st., Balt., Md.
Records, W. B., Laurel, Del.
Rehfuss, G. & Sons, 1313 Tiernan st., Phila., Pa.
Remington, G. H., 173 Westminster st., Providence, R. I.
Reynolds, G. E., 13 Newark st., Hoboken, N. J.
Richmond & Potts, 1001 Chestnut st., Phila., Pa.
Roberts, A. W., 274 Main st., Hartford, Conn.
Roberts, J., 206 B'way, N. Y.
Robinson, A. W., 1343 Arch st., Phila., Pa.
Rodgers, J., 76 Livingston av., Albany, N. Y.
Rossi, A., 43 Union pl., Union Hill, N. J.
Rusling, G. M., 45 Montgomery st., Jersey City, N. J.

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Schramm, C. F. W., Bay, ft. Taylor st., San Francisco, Cal.
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Scott, R. W., 44 N. 4th st., Phila., Pa,
Scott, W. W., 34 Park Row, N. Y.
Seley, C. A., St. Paul, Minn.
Shaw, T., 915 Ridge st., Phila., Pa.
Shinn, J., 2734 N. 5th st., Phila., Pa.
Short, A., Ellendale, Del.
Sickels, G. W., 103 Adams st., Chicago, Ill.
Simpson, C. S., Nevada Blk., San Francisco, Cal.
Sites & Harrison, 1 Montgomery st., Jersey City, N. J.
Smedburg, J. R., 30 Fireman's Bldg, Balt., Md.
Smith, J. M., 36 Moffat Bldg, Detroit, Mich.
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Steele, D., 6 Bowling Green, N. Y.
Stevens, A. G., Manchester, N. H.
Stevens, A. L., 11 S. 9th st., Phila., Pa.
Stevens, G. W., Manchester, N. H.
Stevenson, J. E., 61 B'way, N. Y.
Taws & Hartmann, 1233 N. Front st., Phila., Pa.
Thomson & Evans, 112 Beale st., San Francisco, Cal.
Thurston, J. B., Concord, N. H.
Tivy, L., 71 John st., N. Y.
Tourtelotte, E. F., 21 Park Row, N. Y.
Vorhis, E. S. & Co., Atlanta, Ga.
Vreeland, C., 31 Montgomery st., Jersey City, N. J.
Wagner, H. D., 119 S. 4th st., Phila., Pa.
Walker, C. K., Manchester, N. H.
Walter Bros., 105 Cannon st., Bridgeport, Conn.
Warden, H. N., 18th, c. Alleghany av., Phila., Pa.
Warrington, G., 86 N. Clinton st., Chicago, Ill.
Weightman, W. H., 19 Barclay st., N. Y.
White, B. C., 107 Dearborn st., Chicago, Ill.
Whitton, J., 19 Whitehall st., N. Y.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.
Wickes, G. T., Bozeman, Mont.
Wiegand, S. L., 146 S. 6th st., Phila., Pa.
Wilder, M. G., 816 Cherry st., Phila., Pa.
Wilkinson, A. M. E., 30 N. 5th st., Phila., Pa.
Wingate, C. F., 119 Pearl st., N. Y.
Wolff, A. R., Potter Bldg., N. Y.
Wood, W. H., 111 Liberty st., N. Y.
Woodbury, J. A., 8 Exchange pl., Boston, Mass.
Woodbury, E. F., 8 Exchange pl., Boston, Mass.
Wortendyke, N. D., 259 Washington st., Jersey City, N. J.
Young, J. P., Manchester, N. H.
Yule, G., 32 Eagles st., Newark, N. J.
Zell Engineering Co., 112 Liberty st., N. Y.; 420 Library st., Phila., Pa.

Engineers—Metallurgical.

Hunt & Clapp, 95 5th av., Pittsburgh, Pa. **72.**
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.

Engineers—Mining.

Am. Institute of Mining Engineers, 13 Burling sl., N. Y.
Atwood, M., 402 Montgomery st., San Francisco, Cal.
Ayer, J. C., 40 Water st., Boston, Mass.
Benedict & Cole, 32 Liberty st., N. Y.
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Bowie, A. J., Jr., 217 Sansome st., San Francisco, Cal.
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Corning, F. G., 35 Broadway, N. Y.
Dahlgren, C. B., 63 Broadway, N. Y.
Del, M. A., 120 Sutter st., San Francisco, Cal.
Dewees, W. H., 206 S. 4th st., Phila., Pa.
Eames, H. H., 94 Mont Block, San Francisco, Cal.
Eltonhead, W. B., 2136 Arch st., Phila., Pa.
Field, R. P., 148 S. 4th st., Phila., Pa.
Frazer, P., 201 S. 5th st., Phila., Pa.
Gilson, L., 211 Sansome st., San Francisco, Cal.
Gignoux, C. C., 35 Broad st., N. Y.
Graham, B. F., 408 California st., San Francisco, Cal.
Graham, T. H., 400 Chestnut st., Phila., Pa.
Gutzkow, F., 18 Columbia sq., San Francisco, Cal.
Hague, J. D., 18 Wall st., N. Y.
Hanks, H. G., 212 Sutter st., San Francisco, Cal.
Harden, O. B., 907 Walnut st., Phila., Pa.
Harden, E. B., 905 Walnut st., Phila., Pa.
Hildreth, W. E., 52 B'way, N. Y.
Hendy, J. H., c. Mission & Fremont sts., San Francisco, Cal.
Hobson, J. B., 45 Merchants' Exchange, San Francisco, Cal.
Hodges, A. D., Jr., 22 California st., San Francisco, Cal.
Holcombe, S. E., 11 Geary st., San Francisco, Cal.
Howe, H. M., 75 State st., Boston, Mass.
Humbert & Co., 95 Milk st., Boston, Mass.
Hutchins, E. P., 330 Pine st., San Francisco, Cal.
Janin, A., 310 Pine st., San Francisco, Cal.
Johnston, W. D., 113 Leidesdorff st., San Francisco, Cal.
Kallmes, J., 309 California st., San Francisco, Cal.
Kempton & Thacher, 61 B'way, N. Y.
Krom, S. R., 151 Cedar st., N. Y.
La Monte, J. D., 413 California st., San Francisco, Cal.
Lean & Blair, 708 Penn av., Pittsb'g, Pa.
Luckhardt, C. A. & Co., 23 Steven st., N. San Francisco, Cal.
McDermott & Duffield, 2 Wall st., N. Y.
Maynard, G. W., 35 Broadway, N. Y.
Mellis, D. E., 508 Montgomery st., San Francisco, Cal.
Miller, W. P., 37 Nevada Blk., San Francisco, Cal.
Norman, E., 309 California st., San Francisco, Cal.
Parsons, C. O., 77 State st., Boston, Mass.
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Pearson, J. M., 413 California st., San Francisco, Cal.
Pope, O. C., 310 Pine st., San Francisco, Cal.
Price, T., 524 Sacramento st., San Francisco, Cal.
Randolph, J. C. F., 35 B'way, N. Y.
Reed, S. A., 35 B'way, N. Y.
Richards, J., 318 Pine st., San Francisco, Cal.
Riotte, E. N., 104 Washington st., N. Y.
Rolker, C. M., 18 B'way, N. Y.
Sherwood, W. R., 309 California st., San Francisco, Cal.
Smith, W. A., 16 Exchange pl., N. Y.
Stetfeldt, C. A., 18 B'way, N. Y.
Stretch, R. H., 420 Montgomery st., San Francisco, Cal.
Symington, W. N., 18 B'way, N. Y.
Tagliabue, F. P., 420 Montgomery st., San Francisco, Cal.
Wheeler, A. M., 320 Sansome st., San Francisco, Cal.
Wilson, R., 409 California st., San Francisco, Cal.

Engineers—Pneumatic.

Howard & Morse, 45 Fulton st., N. Y.

Engineers—Submarine.

Gray & Storey, 107 State st., Rochester, N. Y.
Jones, H., 142 State st., Rochester, N. Y.
Lowe, E. R., 2 Coenties sl., N. Y.
Peacock, O. H., 16 City Hall, Rochester, N. Y.
Ryan, J. C., 118 Arcade, Rochester, N. Y.
Smith, R. J., 66 Arcade, Rochester, N. Y.

Engineers' and Surveyors' Drawing Materials and Instruments.

Aloe, A. S. & Co., 300 N. 4th st., St. Louis, Mo.
Beckmann, L., 57 Adams st., Toledo, O.
Brandis, F. E., 55 Fulton st., N. Y.
Buff & Berger, 9 Province Court, Boston, Mass.
Curley, W. & L. E., Troy, N. Y.
Echel, F., 16 Burling sl., N. Y.

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Gurley, W. & L. E., 514 Fulton st., Troy, N. Y.
Heller & Brightly, Spring Garden st. & Ridge av., Phila., Pa.
Hernstein-Prince, S. & O. Co., 317 N. 4th st., St. Louis, Mo.
Herr & Sielig, 192-194 Madison st., Chicago, Ill.
Ketcham, Chas. H. & Co., 27 Nassau st., N. Y.
Keuffel & Esser, 127 Fulton st., N. Y.
McAllister, Oswald, 1610 Chestnut st , Phila, Pa.
McAllister, W. Mitchell, 728 Chestnut st., Phila., Pa.
Montgomery & Co., 105 Fulton st., N. Y.
Pfister, Herman, 195 5th st., Cincinnati, O.
Pollock, Alex., 212 West st., N. Y. **32.**
Queen, Jas. M. & Co., 924 Chestnut st., Phila., Pa.
Randolph, T. F., 51 W. 4th st., Cincinnati, O.
Schlener, John A. & Co., 425 Nicollet av., Minneapolis, Minn.
Soltman, E. G., 119 Fulton st., N. Y.
Thaxter, S. & Son, 125 State st., Boston Mass.
Woolman, G. S., 116 Fulton st., N. Y. **19.**
Young & Sons, 43 N. 7th st., Phila., Pa. **12.**

Engravers—Bank Note and Ticket Printers.

Allan, James N., 640 Herkimer st., B'klyn, N. Y.
American Bank Note Co., 78-86 Trinity pl., N. Y.
Baldwin & Gleason Co. (Ltd.), 61 B'way, N. Y.
Franklin Bank Note Co., 142 B'way, N. Y. **1.**
Hamilton Bank Note Engraving and Printing Co., 1 B'way, N. Y.
Homer Lee Bank Note Co. (The), Tribune B'ldg, N. Y.
International Bank Note Co., 18 B'way, N. Y.
N. Y. Bank Note Co., 1 B'way, N. Y.

Engravers—Map.

Benedict, Geo. H. & Co., 175 and 177 S. Clark st., Chicago, Ill.
Fisk & Co., 96 Fulton st., N. Y.
Folger, L. B., 5th st., Cincinnati, O.
Hilpert & Chandler, 167 Dearborn st., Chicago, Ill.
Levick & Levick, 46 Exch. pl., N. Y.
Matthews, Northrup & Co., Buffalo, N. Y.
Struthers, Jos. & Co., 24 New Chambers st., N. Y.
Stuart, Oliver J., 8 Madison st., N. Y.

Engravers—Railroad and S. S.

Anderson, F. J., 351 Main st., Buffalo, N. Y.
Bartlett & Co., 194 B'way, N. Y.
Budden & Son, 10 W. Wall st., Atlanta, Ga.
Calvert Lithographing and Engraving Co., Larned and Shelby sts., Detroit, Mich.
Chandler, H. C., 13 E. Washington st., Indianapolis, Ind.
Conant, J. S. & Co., Boston, Mass.
Crosscup & West Engraving Co., 907 Filbert st., Phila., Pa. **59.**
Electro Light Engraving Co., 157 William st., N. Y.
Franklin Bank Note Co., 142 B'way, N. Y. **1.**
Gies & Co., Buffalo, N. Y.
Hiess, J. S. C., 627 Walnut st., Phila., Pa.
Holton, E. E., 506 Olive st., St. Louis, Mo.
Kyes & Woodbury, Worcester, Mass.
Loveland, W. A., 23 4th st., S. Minneapolis, Minn.
McFee & Co., R. T., 51 W. 4th st., Cincinnati, Ohio.
Moes Engraving Co., 535 Pearl st., N. Y. **62.**
Quirk, J. S. & Co., 533 Chestnut st., Phila., Pa.
Roe, Chas. C., Louisville, Ky.
Smith Bros., 119 S. 4th st., Phila., Pa.
Taber, Chas. & Co., 6 N. Water st., New Bedford, Mass.
U. S. Engraving Co., Detroit, Mich.
Vandercook & Co., Chicago, Ill.
Van Leyen & Co., 149 Jefferson av., Detroit, Mich. **66.**
Weisbrodt, H. W., 5th, c. Walnut st., Cincinnati, O.
Wilson A. S. & Co., 318 B'way, N. Y.
Wright, Chauncey, 75 Nassau st., N. Y.

Equipment—Car Machine Shop.

Fay, J. A. & Co., Cincinnati, O.
Niles Tool Works, Hamilton, O.
Place, George, 120 B'way, N. Y. **81.**
Pond Machine Tool Co., Plainfield, N. J.

Equipment—Railway.

Barrows & Co., 66 B'way, N. Y.
Boynton, Geo. A., 47 B'way, N. Y.
Carey, Geo. H., 1 B'way, N. Y.
Childs, O. W. & Co., 150 B'way, N. Y.
Dayton Malleable Iron Co., Dayton, O.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Harris, T. Wm. & Co., 46 B'way, N. Y. **79.**
Heyn, Alfred, 47 B'way, N. Y.
Hogan & Co., John L., 216 S. 4th st., Phila., Pa.
Howard, Childs & Co., 20 Lewis Blk., Pitts'bgh, Pa.
Humphreys & Sayce, 1 B'way, N. Y.
Innes, Thos. B & Co., 115 B'way, N. Y.
Jordan, F., 200 Broadway, N. Y.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Kimbark, S. D., Chicago, Ill.
King, Albert H., 44 Broadway, N. Y.
Leavitt, C. W. & Co., 161 Broadway, N. Y.
Litchfield Car and Machine Works, Litchfield, Ill.
Lindsay, Parvin & Co., 328 Walnut st., Phila., Pa.
Mengis, M. C., 12 Broadway, N. Y.
N. Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
Patten, James T., 18 Broadway, N. Y.
Place, George, 120 Broadway, N. Y. **81.**
U. S. Rolling Stock Co. (The), 35 Wall st., N. Y.

Equipment R. R.—Second Hand.

Barrows & Co., 64 Broadway, N. Y.
Humphreys & Sayce, 1 Broadway, N. Y.
Innes, Thos. B. & Co., 115 Broadway, N. Y.
King, Albert H., 44 Broadway, N. Y.
Leavitt, C. W. & Co., 161 Broadway, N. Y.
Logan, James H., Penn Bldg., Pittsb'gh, Pa. **53.**
Middleton, W. S., 52 John st., N. Y.
N. Y. Equipment Co. (The), 10 Wall st., N. Y. **95.**
N. Y. Railway Supply Co., 40 Wall st., N. Y.
Saxton, J. C., 52 Broadway, N. Y.
Walkley & Co., 10 Wall st., N. Y.

Equipment R. R.—Electric.

Bentley Knight Electric Ry. Co., 115 Broadway, N. Y.
Daft Electric Light Co. (The), 115 B'way, N. Y.
Safety Electric Construction Co., 41 Wall st., N. Y.
Sprague Electric Ry. and Motor Co., 16-18 Broad st., N. Y.
Van Depoele Electric Mfg. Co., 15-21 N. Clinton st., Chicago, Ill.

*Equipment—Street R. R.

Martin, Rufus & Co., 114 Nassau St., N. Y. **52.**

Equipment (Second Hand) Car Trust Plan.

New York Equipment Co. (The), 10 Wall st., N. Y. **95.**

Expanders—Tube.

Crescent Mfg. Co., 3 Michigan st., Cleveland, O.
Dudgeon, Richard, 24 Columbia st., N. Y.
McCoy & Sanders, 26 Warren st., N. Y.

Excelsior.

Bill, J. C., Lebanon, Conn.
Boklage, Frank, Louisville, Ky.
Boston Excelsior Co., 26 Canal st., Boston, Mass.

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Decker Bros., East Branch, N. Y.
Demarest & Russell, Bloomingdale, N. J.
Geiger, Fred., Evansville, Ind.
Grand Rapids Excelsior Co., Taylor & Queen sts., Grand Rapids, Mich.
Ham, John G., Ossipee Centre, N. H.
Hill, S. L., Sabattus, Me.
Hombeck, John C., Boiceville, N. Y.
Hutchins, Samuel L., Union, N. H.
Lackenmeyer, A., Narrowsburg, N. Y.
Lang, I. N., Leavenworth, Kans.
Nicolai, A., Portland, Ore
Morse, H. N., Lackawack, N. Y.
Murray, Lorenzo & Co., Hinesburgh, Vt.
Nelson, Jos., P., Sutton, N. H.
Page, Joel R., North Sandwich, N. H.
Parker, Jos. H., Milo, Me.
Pendleton, Asbury S., Unity, Me.
Pettingill, A. N., P. O., Great Falls, N. H.; Berwick, Me.
Pillsbury, Stephen W., Croydon Flat, N. H.
Poor, M. D., Antrim, N. H.
Porter, J. W. & Son, Strong, Me.
Robinson, R. H., Louisville, Ky.
Russell Bros. (Ester & Co.), Phillips, Me.
Russell Bros. & Co., Temple, Me.
Smith, Davis Mfg. Co., 23d st. & Lucas av., St. Louis, Mo.
Thayer, A. R., Cheboygan, Mich.
Tomkinson, J. & R., Plymouth, N. H.
Towle & Austin, Belgrade Mills, Me.
Weld & Johnson, New London, Wis.
Wheeler, A. W. & Co., 126 Hanover st., Boston, Mass.
Wing, Benj., Vassalborough, Me.

Excelsior—Liquid.

Woodhouse, Samuel F., Frankford, Pa. **70.**

Excavators.

Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Carson, H. A., 21 Hamilton st., Boston, Mass.
Excelsior Iron Works, Cleveland, O.
Hawley Steam Snow Plow & Excavator Co., Rochester, N. Y.
Hayes, John J., Kent & West sts., Greenpoint, L. I., N. Y.
Industrial Works, Bay City, Mich.
Kingsfords Foundry & Machine Works, Oswego, N. Y.
Marion Steam Shovel Co., Marion, O.
New Era Mfg. Co. (The), 83 N. Ashland av., Chicago, Ill.
Osgood Dredge Co., 37 State st., Albany, N. Y.; Potter Bldg., N. Y.
Souther, John & Co., 12 P. O. sq., Boston, Mass.
Toledo Foundry & Machine Co., Toledo, O.
Vulcan Iron Works, 86 N. Clinton st., Chicago, Ill.
Vulcan Iron Works Co., Oswego, N. Y.
Vulcan Iron Works, Toledo, O.

Exhausters.

Blake, Geo. F. Mfg. Co., 95 Liberty st., N. Y.
Boston Blower Co., 276 Franklin st., Boston, Mass.; Hyde Park, Mass.
Guild & Garrison, B'klyn, N. Y.
Hussey Re-Heater & Steam Plant Impt. Co., 15 Cortlandt st., N. Y.
Packard, O. L., Milwaukee, Wis.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Watson & McDaniel, 144 N. 7th st., Phila., Pa.
Webster Bros. & Co., 491 N. 3d st., Phila., Pa.

Expansion Joints.

Wainwright Mfg. Co., 65 Oliver st., Boston, Mass.; 93 Liberty st., N. Y.

Eveners—Railway Head.

Stafford, Geo. W. Mfg. Co., 5 Point st., Providence, R. I.

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Cooper, Hewitt & Co., 17 Burling sl., N. Y.

Exhaust and Rotating Fans.

Backus Water Motor Co., Hamilton st., Newark, N. J.
Baird, U., Machinery Co., 75 Water st., Pittsb'g, Pa.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Buss Machine Works, Grand Rapids, Mich. **58.**
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Champion Blower and Forge Co., 26 E. James st., Lancaster, Pa.
Clark, Geo. P., Windsor Locks, Conn.
Crown Iron Works, 113 2d av., s. e., Minneapolis, Minn.
Detroit Blower Co., Detroit, Mich.
Dickson Mfg. Co., Scranton, Pa.
Egan Co. (The), Cincinnati, O.
Foos Mfg. Co. (The), Springfield, O.
Gail & Bumiller, 181 S. Clinton st., Chicago, Ill.
Garden City Fan Co., 52-58 W. Washington st., Chicago, Ill.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Hazleton Iron Works, Hazleton, Pa.
Hugett & Smith Mfg. Co., 1400 Russell st., Detroit, Mich.
Kerrick, J. H., 2d av., & 5th st., Minneapolis, Minn.
Lambert, S. W., 2031 Green st., Phila., Pa.
Leach, W. H., Uxbridge, Mass.
Preble Machine Works Co. (The), 38-40 Monroe st., Chicago, Ill.
Sargents, C. G., Sons, Graniteville, Mass.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Tolhurst, W. H. & Son, Troy, N. H.

Fans—Ventilating.

Andres, H., 22 N. 4th st., Phila., Pa.
Andrews & Johnson, 59 Lake st., Chicago, Ill.
Burnes, Chas. & Co., 40 Sycamore st., Cincinnati, O.
Crawford & McCrimmon, Brazil, Ind.
Dickson Mfg. Co., Scranton, Pa.
Exhaust Ventilator Co., 116 Dearborn st., Chicago, Ill.
Hope Ventilator Co., Kansas City, Mo.; 1403 Russell st., Detroit, Mich.
Nason Mfg. Co., 71 Beekman st., N. Y.
N. Y. Exhaust Ventilator Co., 45 Fulton st., N. Y.
Phila. Exhaust Ventilator Co., 121 N. 4th st., Phila., Pa.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.

Fare Boxes.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Anderson, A. A., Indianapolis, Ind.
Beaman, T. L., Knoxville, Tenn. **61.**
Brownell & Wight Car Co., 2300 Broadway, St. Louis, Mo.
Dederick, Z. P., Sherman, Tex.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Haines Bros., 55 Broadway, N. Y.
Johnson, Tom L., Indianapolis, Ind.
Keefer, Horace A. & Co., 54 Sheidley Bldg., Kansas City, Mo. **88.**
Kail Manufacturing Co., 224-226 S. Clinton st., Chicago, Ill.
Laclede Car Co., 4500 N. Second st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Masson, Milton I., 365 av. A, N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Stephenson, John, Co. (Ltd.), 47 E. 27th st., N. Y.
Wales Mfg. Co., 176 E. Water st., Syracuse, N. Y. **79.**

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Whiting, T. J., 7 South pl., Finsbury, London, Eng.
Willis & Sandgrau, 1804 Mission st., San Francisco, Cal.

Fare Collectors—Automatic.

Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Haines Bros., 55 Broadway, N. Y.
Kayne, Joseph & Sons, Leeds, England.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Stephenson, John, Co. (Ltd.), 47 E. 27th st., N. Y.

Feed Cutters.

Belle City Mfg. Co., Racine, Wis.
Foos Mfg. Co. (The), Springfield, O.
Kaestner, Chas & Co., 303 S. Canal st., Chicago, Ill.
McLaughlin, Sheldon & Co., Owatonna, Minn.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Noye, J. T. Mfg. Co. (The), Buffalo, N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Ross Mfg. Co., Springfield, O.

Felt Mfrs.

Acme Covering Works, 82 John st., N. Y.
Am. Ash Felting Co., 55 Kilby st., Boston, Mass.
Am. Felting Co., 257 Broadway, N. Y.
Am. Steam Covering Co., 40 Cortlandt st., N. Y.
Asbestos Boiler Covering Co., 402 Montgomery st., San Francisco, Cal.
Asbestos Felting Co., 101 Maiden la., N. Y.
Asbestos Packing Co., 169 Congress st., Boston, Mass.; 33 John st., N. Y.
Bacon, C. W., Winchester, Mass.; 22 Exchange pl., Boston, Mass.
Baeder, Adamson & Co., 67 Beekman st., N. Y.; 143 Milk st., Boston, Mass.; 139 Main st., Cincinnati, Ohio.
Banigan, Jos., Blackstone, Mass.
Beatty & Co., Mishawaka, Ind.
Brown, D. S. & Co., 36 California st., San Francisco, Cal.
Buffum's, D. & H. Sons, 43 Elm st., N. Y.
Burton, W. H., 706 Mission st., San Francisco, Cal.
Chalmers-Spence Co., 419-421 8th st., N. Y. **1v.**
Cincinnati Salamander Felting Co., 272 B'way, Cincinnati, O.
Chapman & Soden, 112-116 Water st., Boston, Mass.
Connor, Thomas J., 714 N. Main st., St. Louis, Mo.
Crane, H. S., 48 Clinton pl., N. Y.
Crane & Chapins, 13 University pl., N. Y.
Crocker, A. B., & Co., 31-37 Avon pl., Boston, Mass.
Delong, French & Delong, 128 Pearl st., N. Y.
Detroit Felting Works, 187 Larned st., Detroit, Mich.
Dole, E. & Co., Campton Village, N. H.
Dolge, Alfred, 122 E. 13th st., N. Y.
Dunbar, G. & Co., 76 Pearl st., Boston, Mass.
Essex Felting Mills, Rahway, N. J.
Fowler, G. C., 419 Pacific st., San Francisco, Cal.
Gelhert, Louis, 508 E. 89th st., N. Y.
Gesswein, T. W., 39 John st., N. Y.
Gilmour, R. M., 82 John st., N. Y.
Gray, F. Co., Piqua, O.
Greenwood & Martin, Beloit, Wis.
Hawthorn Woollen Mill, Glenville, Conn.
Hayes, E. A., 262 West st., N. Y.
Hayt, E. K., 171 B'way, N. Y.
Heathcote, L. K. & Co., Glen Rock, Pa.
Higgins, F. T., 192 West st., N. Y.
Higham, O., Providence, R. I.
Hughes, T. W., 140 Broad st., N. Y.
Huyck & Argersinger, 340 Central av., Albany, N. Y.
Jackson, G., Little Falls, N. J.
Jacocks, J. F. & B. F., 39 Worth st., N. Y.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.; 314 Townsend st., San Francisco, Cal.
Kittel, Julius, 1480 Tremont st., Boston, Mass.
Knox Woolen Co., Camden Me.
Lawrence Felting Co., Blackstone, Mass.
Lounsbury & Bissell Co., Norwalk, Conn.
Lowell Felting Mills, Pawtucket, opp. Walker st., Lowell, Mass.
McNab & Belden, 29 Hubert st., N. Y.
Manhattan Felt Works, 32 John st., N. Y.
Martin, E. H. & Co., 163 Pearl st., N. Y.
Martin, Thos., 314 Canal st., N. Y.
Mather, F. J., Stanley, N. J.
Mickle, John, Union, N. H.
Miller, Henry W., 533 Montgomery av., Phila., Pa.
Miner, H. A., 181 B'way, N. Y.
Monroe Felt & Paper Co., Lawrence, Mass.
New, T., 32 John st., N. Y.
New England Felt Roofing Co., 22 Milk st., Boston, Mass.
New England Felting Co., 617 Albany st., Boston, Mass.
Noske, H., 38 E. Canal st., Phila., Pa.
Ostermoor, H. D. & Son, 35 B'way, N. Y.; 127 King st., B'klyn, N. Y.
Pacific Asphaltum Co., 422 Mont. st., San Francisco, Cal.
Page, Harlan, 143-145 N. 3d st., Phila., Pa.
Perine, N. P., 28 New Montgomery st., San Francisco, Cal.
Phillips' Felting Works, 341 Main st., Lowell, Mass.
Putnam, Geo. D. & Co., 127 Milk st., Boston, Mass.
Rankin, W. H., 91 Maiden Lane, N. Y.
Ray, F. B., Franklin, Mass.
Rice, Kendall & Co., 91 Federal st., Boston, Mass.
Riley, J., 12 N. 2d st., Troy, N. Y.
Salamander Felting Co., 33 John st., N. Y.; 7 Exchange pl., Boston, Mass.; San Francisco, Cal.
Shields & Brown, 143 Worth st., N. Y.
Shuler & Beninghofen, Hamilton, O.
Storey, J. C. & Co., 10 State st., Boston, Mass.
Stroock, S. & Co., 62 Walket st., N. Y.
Suhn, W. M., 96 John st., N. Y.
Taylor & Bloodgood, Jr., Cranford, N. J.; 8 Thomas st., N. Y.
Thayer, A. D., Franklin, Mass.
Tingue, House & Co., 56 Reade st., N. Y.
Union Mfg. Co., 72 Franklin st., Boston, Mass.
U. S. Felt & Asbestos Mills (The), 262 West st., N. Y.
U. S. & Foreign Salamander Felting Co., 1 Commercial Wharf, Boston, Mass.
Vallean, T. M., 206 West st., N. Y.
Van Ness, W. H., Little Falls, N. J.
Van Ness & Sindle, Little Falls, N. J.
Van Orden, Edward & Co., 72 Maiden la., N. Y.
Wait's Felting Mills, Franklin, Mass.
Waterbury, H. & Sons, Oriskany, N. Y.
Wild, Joseph & Co., 82-84 Worth st., N. Y.
Williams, Thos., 337 Broome st., N. Y.
Wolstencroft, W. & Sons, Bridge, c. Mulberry st., Phila., Pa. Frankford, Pa.
Worcester Felting Co., Worcester, Mass.
Zucker & Levett Chemical Co. (The), 568 W. 16th st., N. Y.

Felt—Hair.

Asbestos Felting Works, 101 Maiden la., N. Y.
Asbestos Packing Co. (The), 169 Congress st., Boston, Mass.
Balder, Adamson & Co., 730 Market st., Phila., Pa.
Chalmers-Spence Co. (The), 419 & 421 8th st., E. R., N. Y. **1v.**
Connor, Thomas J., 714 N. Main st., St. Louis, Mo.
DeLong, French & Delong, 128 Pearl st., N. Y.
Gilmour, Robert M., 82 John st., N. Y.
Lowell Felting Mills, Pawtucket, opp. Walker st., Lowell, Mass.
McNab & Belden, Little Falls, N. J.
Sindle, S., Little Falls, N. J.

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Putnam, Geo. D. & Co., 127 Milk st., Boston, Mass.
Van Ness, W. H., Little Falls, N. J.
Worcester, F., 108 5th av., Chicago, Ill.

Fences—Wire and Barb Wire.

A. B. C. Fence Works, Los Angeles, Cal.
Acme Steam Wire & Iron Railing Works, 80-90 Pearl st., B'klyn, N. Y.
Adam, W. J., Joliet, Ill.
Albany Wire Works, Albany, N. Y.
Arkansas Valley Fence Co., Newton, Kan.
Barnum, E. T., Detroit, Mich.
Bates Bros., Carthage, Mo.
Beuster Steam Wire & Iron Works (The), 106 & 108 Water st., Toledo, O.
Betts Fencing Co., Palmer, Mass.
Bolles, J. E. & Co., 80-84 W. Woodbridge st., Detroit, Mich.
Booth, John, 110 E. Lake st., Chicago, Ill.
Bowes, F. K., 31 Dearborn st., Chicago, Ill.
Bromwell Brush & Wire Goods Co. (The), 181 Walnut st., Cincinnati, O.
Buck-Thorn Fence Co. (The), Trenton, N. J.
Cincinnati Barbed Wire Fence Co., 120 E. 6th st., Cincinnati, O.
Cleveland Barb Fence Co., Cleveland, O.
Clinton Wire Cloth Co., 59 Beekman st., N. Y.; Clinton, Mass.
Covington Picket Wire Fence Co., Covington, Ky.
Crandal Mfg. Co. (The), 74 Michigan st., Chicago, Ill.
CrescentMfg. Co., 906 S. Ewing av., St. Louis, Mo.
Defiance Paint Works, S. E. cor. Findlay and Providence sts., Cincinnati, O.
De Witt Wire Cloth Co., 11 Murray st., N. Y.
Dow Wire Works, 726 W. Market st., Louisville, Ky.
Easton & Cochran, Winfield, Kan.
Elkins & Grant, Dallas, Ore.
Elwood, I. L. & Co., De Kalb, Ill.
Ernst, Chas. F., 311 Walnut st., Buffalo, N. Y.
Estey, W. Sheperd, 71 Fulton st., N. Y.
Fitzsimmons, John, Lafayette, Ind.
Forest City Wire & Iron Works, 111 Franklin av., Cleveland, O.
Gilbert & Bennett Mfg. Co., 228 Lake st., Chicago, Ill.; 42 Cliff st., N. Y.
Gilbert & Stewart, Ravenna, O.
Gilmer, S. B., Morning Sun, O.
Griffin, C. C. & Co., Morrison, Ill.
Griswold, J. Wool, Troy, N. Y.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Hazard Mfg. Co., Wilkes-Barre Pa,
Hill, H. W. & Co., Decatur, Ill.
Howard & Morse, 45 Fulton st., N. Y.
Indiana Wire Fence Co., Crawfordsville, Ind.
Iowa Barb Steel Wire Co., Marshalltown, Ia.
Kilmer Mfg. Co., 543 S. State st., Chicago, Ill.
Kincaid & Holmes, Troy, O.
Larm Mfg. Co. (The), 84 S. Market st. (Room 21), Chicago, Ill.
Lockport Wire Fence Co., Lockport, Ill.
Lock Stitch Fence Co., Joliet, Ill.
Logan, Gregg & Co., 306 Wood st., Pittsb'g, Pa.
Loyd, A. M., Winfield, Kans.
Ludlow-Saylor Wire Co., 116 S. 4th st., St. Louis, Mo.
Ludwig, Henry, Detroit, Mich.
Lyman Mfg. Co., 51 Dearborn st. (Room 13), Chicago, Ill.
McMullen Woven Wire Fence Co., 158 W. Lake st., Chicago, Ill,
Marsh, A. L., 242 E. 72d st., N. Y.
Mershon & Bancroft, 218 E. Lake st., Chicago, Ill.
National Iron Fence Co. (The), 173 B'way, N. Y.
National Wire & Iron Co., Detroit, Mich.
Ohio Steel Barb Fence Co., Cleveland, O.
Oliver & Roberts Wire Co. (Ltd.), 801 Bingham st., Pittsb'gh, Pa.
Oskaloosa Fence Co., Oskaloosa, Ia.
Powell, F. & Co., 242 Summit st., Toledo, O.
Price, Condit & Courter, Minneapolis, Minn.
Richmond Fence Co., 1006 Main st., Richmond, Ind.
Rickards Fence Co., Keokuk, Ia.
Roberts, C. H., Minneapolis, Minn.
Roeblings, John A. Sons & Co., 117-119 Liberty st., N. Y. **8.**
Schnabel & Co., 51 Dearborn st. (Room 12), Chicago, Ill.
Sedgwick Bros., Richmond, Ind.
Sherman & Marsh, 51 Dearborn st. (Room 13), Chicago, Ill.
Southern Wire Co., St. Louis, Mo.
Spates, J. M., Pawnee City, Neb.
Strader, E. A., Attica, Ind.
Thomas, Wilber, Quincy, Ill.
Thorn, Wire Hedge Co., 15-21 N. Clinton st., Chicago, Ill.
Utter, Homer, Cuba, N. Y.
Washburn & Moen Mfg. Co., Worcester, Mass.; 107 Lake st., Chicago, Ill.
Western Fence Co., 21 N. Clinton st., Chicago, Ill.
William Burlit Co., New Egypt, N. J.
Wire Fence Improvement Co., 260 S. Clark st. (Room 24), Chicago, Ill.
Wooley, John C., Parsons, Kan.

Fence Building Machine for R. R.'s.

Brown, John P., Rising Sun, Ind.

Fence Posts.

Ayer, Ed. E., 234 S. Water st., Chicago, Ill.
Bushnell, A., Kansas City, Mo.
Kaw Valley Lumber Co., 9th st. & B'way, Kansas City, Mo. **16.**
Rathbun Co. (The), Deseronto, Ont.

Fences, Wrought Iron.

Balles, J. E. & Co., Detroit, Mich.
Champion Iron Fence Co., Kenton, O.
Chatterton, J. B., E. end Plymouth av. Bridge, Minneapolis, Minn. **54.**
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Lomer, Jr., G., Montreal, Canada.

Fencing—Iron and Steel.

Carlisle Mfg. Co., Carlisle, Pa. **50.**
Hanika Iron Fence Co., Springfield, O.
Lawrence Iron & Steel Co., Ironton, O.
Meyers, Fred. J., Mfg. Co., 419 Madison st., Covington, Ky.
Powell, F. & Co., 242 Summit st., Toledo, O.

Files—Letter.

Diemer, John F., 71 Fulton st., N. Y.
Forest City Paper Box Co., Cleveland, O.
Heath, Elroy N., Wakefield, Mass.
Jayne & Crosby, 110 Liberty st., N. Y.
New York File & Index Co., 52 Reade st., N. Y. **34.**
Schlicht & Field Co., 114 St. Paul st., Rochester, N. Y.
Tucker Patent File Cabinet (The), 46 Murray st., N. Y.
Western File & Index Co., 109 Wabash av., Chicago, Ill.

Files and Rasps.

Acme Co. (The), Collinsville, Conn.
Adams, C. W., Dayton, O.
Ager, Wm. G., Lockport, N. Y.
Althof, Wm. & Son, Erie, Pa.
Appleton, Wm. R., Worcester, Mass.
Arcade File Works, Sing Sing, N. Y.
Armsheimer, Henry, 85 Nassau st., N. Y.
Atlantic File Works, 27 Centre Market st., Balt., Md.
Baldridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Baldwin, G. W., Des Moines, Iowa.
Bandi, Nicholas, Wheeling, W. Va.
Barnett, G. & H., 21-43 Richmond st., Phila., Pa.
Barthorp, G., Springfield, O.
Belcher, H. W., 30 Gold st., N. Y.

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Bergman, J. F., Cleveland, O.
Berks, Geo. & Son, 23 W. Adams st., Syracuse, N. Y.
Boettcher, Herman, 204 N. 1st st., Minneapolis, Minn.
Bollas, W. O., 60 Skillman av., B'klyn. N. Y.
Boynton, E. M., Saw & File Co., 99 Chambers st., N. Y.
Bozenhardt & Foerster, Holyoke, Mass.
Brodigan, L. & Co., Portland, Me.
Brohm, Bernard, 257 S. Pearl st., Albany, N. Y.
Broughton, Thos., Brockton, Mass.
Butts, Henry L., Norwich, Conn.
Buckland File Works, Buckland, Mass.
Buckley, M. & Co., Pawtucket, R. I.
Buffalo File Works, 1401 Niagara st., Buffalo, N. Y.
Bullas, S. P. & Co., 79 Beaver st., Worcester, Mass.
Butler File Co., 632 Essex st., Lawrence, Mass.
Campbell, J. F., 288 Union av., B'klyn, N. Y.
Campbell, M. R., Tullahoma, Tenn.
Canton Saw Works, Canton, O.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Carter, John, 167 Dewitt st., Boston, Mass.
Chaffers & Byrnes, 154 Meeker av., B'klyn, N. Y.
Chambers, Henry, 191 Olive st., New Haven, Conn.
Chambers, Moses, New Britain, Conn.
Chatterton, G., 25 Randall st., Providence, R. I.
Chelsea File Works, 12 Meyer's al., Norwich, Conn.
Clark, C. C., Sing Sing, N. Y.
Clements, W., Evansville, Ind.
Chicago Saw & File Works, 273 S. Canal st., Chicago, Ill.
Collett, Job, Exchange, ft. York st., Bangor, Me.
Columbus File Works, Spring and Front sts., Columbus, O.
Combination File Co., 3500 Germantown av., Phila., Pa.
Conly & Parodix, St. Johnsbury, Vt.
Cook, F. A., Clarinda, Ia.
Cooke, J. C., 1340 Passyunk av., Phila., Pa.
Coppins, Wm., Osseo, Mich.
Cottage File Works, 18 Spratt st., Dayton, O.
Coulman, E. J., Middletown, Conn.
Craig, W. P., Woodson, Ill.
Crosland, J., Indianapolis, Ind.
Cully, Eli, Fitchburg, Mass.
Curran, J., 109 John st., N. Y.
Day, W. H., Amesbury, Mass.
Detroit File Works, Michigan & Indiana aves., Detroit, Mich.
Disston, Henry, Phila., Pa.; Chicago, Ill.; Louisville, Ky.
Doble, A., 13 Fremont st., San Francisco, Cal.
Doig, John P., 46 S. Canal st., Chicago, Ill.
Dolphin, W., Auburn, N. Y.
Doyle, P., Bangor, Me.
Duckworth, John, 30 Middlesex st., Lowell, Mass.
Dunbar, Geo. & Co., 74 Pearl st., Boston, Mass.
Eglisdorf, F., 2020 Carson st., Pittsb'gh, Pa.
Elk Hill Coal & Iron Co., Scranton, Pa.
Emerson, Smith & Co., Beaver Falls, Pa.
England, T., 2600 Smallman st, Pittsb'gh, Pa.
Esman & Amos, Clayton, Ind.
Everhart, James M., Scranton, Pa.
Excelsior File Works, Rochester, N. Y.
Falkenrath & Becker, 1535 S. 7th st., St. Louis, Mo.
Fanton, Geo., Manchester, N. H.
Fitzsimmons, J., Terre Haute, Ind.
Flanagan, Matthew, 181 Brewery st., New Haven, Conn.
Frasse & Co., 92 Park Row, N. Y.
Fritsch, B., Wilmington, Del.
Gallagher, J. T., St. Charles, Ill.
Gates & Jetter, 863 Jefferson st., Buffalo, N. Y.
Gebhardt, W., 35 McMicken av., Cincinnati, O.
Gebhardt, W. Jr., 67 Buckeye st., Cincinnati, O.
George, J., 751 E. Sixth st., Boston, Mass.
Gerlach, Peter & Co., Cleveland, O.
Gesswein, F. W., 39 John st., N. Y.; Paterson, N. J.
Goerner & Planz, Akron, O.
Gorman Bros., 92 Beverly st., Boston, Mass.
Gough, A. & H., 38 Columbus st., Cleveland, O.
Gruele, Wm., Allentown, Pa.
Haardwick & Phillips, Fairmount, Ind.
Hall Bros., 4 S. Main st., Middletown, Conn.
Hallahan, J., 90 Travers st., Boston, Mass.
Hamer & Cook, Huntsville, O.
Hardwick & Phillips, Fairmount, Ind.
Harper, W., Bangor, Me.
Harris, J. & Co., Fort Wayne, Ind.
Harscher, John, 406 Bedford av., B'klyn, N. Y.
Hart, W., 5 Washington sq., Worcester, Mass.
Hawke, G. P., Richmond, Ind.
Hawksley Bros., Minneapolis, Minn.
Hayes File Co., Fort and Beaubien sts., Detroit, Mich.
Heiss, J., 418 East st., Baltimore, Md.
Hellers & Bros., Newark, N. J.
Hensler, Christian, 428 Ireland st., Phila., Pa.
Hiles, C. A. & Co., 235 E. Lake st., Chicago, Ill.
Hiscox, A. J., 10 Milk st., Worcester, Mass.
Hiscox, File Mfg. Co. and Machine Knife Works, W. Chelmsford, Mass.
Hock File and Grindstone Co., 2219 S. 6th st., St. Louis, Mo.
Hoffman, C. & A., Kensington av., c. Adams st., Fkd., Phila., Pa.
Hogan, Thomas E., Washington av., Bridgeport, Conn.
Holden, H. S., 67 S. Canal st., Chicago, Ill.
Horn, Wm. H., & Bro., 451 N. 3d st., Phila., Pa.
Huggard, Jos., Bridgeport, Conn.
Huson, H. M. & Son, Jackson, Mich.
Industry File Works, 33 Winter st., Cleveland, Ohio.
Irwin, J. S., 11 Hill st., Rochester, N. Y.
Jepson, Wm., 861 State st., New Haven, Conn.
Jervis, Wm., 38 E. Montgomery st., Balt., Md.
Jetter Bros., 863 Jefferson st., Buffalo, N. Y.
Judson Mfg. Co., 329 Market st., San Francisco, Cal.
Johnson & Bros., 1 Commercial st., Newark, N. J.
Johnson & White, Troy, N. Y.
Kearney & Foot Co., 101 Chambers st., N. Y.
Keley, Martin, San Francisco, Cal.
Keller, Chas. C. & Co., Fort Wayne, Ind.
Kesting, P., 322 N. Front st., Balt., Md.
Kiefer, E., 12 McMicken av., Cincinnati, O.
Kilner, J., 40 Dorchester av., Boston, Mass.
Klien, Geo. & Bros., 192 McMicken av., Cincinnati, O.
Knighton, W., 213 New st., Phila., Pa.
Knowles, W. & Co., Lowell, Mass.
Kochenrath, C. A., 311 E. Main st., Louisville, Ky.
Krumbhaar, Alex., 1601 Spring Garden st., Philadelphia, Pa.
Laible, Henry & Co., Balt., Md.
Lansing & Co., Church & Bleecker sts., Albany, N. Y.
Lawrence File Co., Winter, c. Essex st., Lawrence, Mass.
Leveridge, J., 32 Gold st., N. Y.
Lewis, George, Carlisle, Ia.
Lewiston File Works, Lewiston, Me.
Linforth, J., 23 Main st., San Francisco, Cal.
Linley, E. H., 714 N. 2d st., St. Louis, Mo.
Litterst, A., 72 Hester st., N. Y.
Looby, Bros., 105 Hickory st., Norwich, Conn.
Low, F. W. & Sons, Middletown, Conn.
Lowell File Works, Lowell, Mass.
Ludwick, C., 252 Mill st., Rochester, N. Y.
Lukanitsch, J. B., 134 Madison st., Chicago, Ill.
Lukanitsch, M., 351 Broome st., N. Y.
McCaffrey & Bro., 1841 N. 5th st., Phila., Pa.
McClellan File Works, East Saginaw, Mich.
McKechnie, J., 7 N. J. R. R. av., Newark, N. J.
Madden & Cockayne File Co., Middletown, N.Y.
Maischoss Bros., 55 Chicago st., Buffalo, N. Y,
Mancer, W. H., 358 N. 2d st., B'klyn, N. Y.
Mann & Bro., 2853 N. 6th st., Phila., Pa.
Marks, A., 21 Mayflower st., Pittsb'gh, Pa.
Miller, August, Zanesville, O.
Miller Bros. & Fletcher, 119 2d st., S. Minneapolis, Minn.
Mills, A. H., 230 Graham av., B'klyn, N. Y.
Milwaukee File Works, Milwaukee, Wis.

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Montgomery & Co., 105 Fulton st., N. Y.
Moores, J. & E. Bros., 18 Center st., Cleveland, Ohio.
Morrill & Frost, Lewiston, Me.
Morris, Thomas, 234 W. 2d st., Cincinnati, O.
Moss, F. W., 80 John st., N. Y.
Moss & Gambles, 83 John st., N. Y.
Moss & Graham, 508 Pearl st., Cincinnati, O.
Mound File Works, 1419 N. Broadway, St. Louis, Mo.
Murcott & Campbell, 302 Union av., B'klyn, N.Y.
Muskegon File Works, Muskegon, Mich.
Myler & Stranza, Eaton, O.
Nashua File Works, Nashua, N. H.
Neikamp & Baker, 2104 N. Broadway, St. Louis, Mo.
Neufeldt, Aug., South Bend, Ind.
Neumann, C., 719 Flushing av., B'klyn, N. Y.
New American File Co., Pawtucket, R. I.
New England File Works, 80 Ocean st., Providence, R. I.
Newton & Shipman, 83 John st., N. Y.
Nicholls, John, 273 S. Canal st., Chicago, Ill.
Nicholson File Co., 118 Acorn st., Providence, R. I.
Niekamp & Baker, 2100 N. Broadway, St. Louis, Mo.
Northwestern File Works, 65 S. Canal st., Chicago, Ill.
Ogle, Joseph L., Dubuque, Ia.
O'Rourke, M. L., 65 Water st., Cleveland, O.
Owen, C. R., Newburgh, N. Y.
Pacific Saw Mfg. Co., 17 Fremont st., San Francisco, Cal.
Padley, H. E., 170 Dyer st., Providence, R. I.
Parkin, J., 218 Fremont st., San Francisco, Cal.
Paul, Chas. B., 187 10th st., B'klyn, N. Y.
Peckham, E. G., Toledo, O.
Penn File Works, 1839 N. 5th st., Phila., Pa.
Peterman & Smith, Seneca Falls, N. Y.
Phelps, J. D., 1645 N. 10th st., Phila., Pa.
Phillips, J., 30 Hampshire st., Boston, Mass.
Phillips, J. L. & Co., Salem, Mass.
Phillips & Cordnan, 6 Com'l st., Newark, N. J.
Potts, W. C. & C., Apple Valley, Ga.
Preston, Wm., 742 Williamsville Rd., Buffalo, N. Y.
Price, H. B., 1232 N. 2d av., Phila., Pa.,
Proctor, G., 205 Kent av., B'klyn, N. Y.
Pukall, F. M., 129 Front st., Hartford, Conn.
Ray, John, 67 N. J. R. R. av., Newark, N. J.
Ray, W. S. & Co., 12 Market st., San Francisco, Cal.
Reeder & Dutlle, Stewardson, Ill.
Regan, Joseph, Middlebury, Conn.
Reilly, E., 104 Schenck st., B'klyn, N. Y.
Reynolds Bros., 142 N. Water st., Columbus, O.
Richardson, S., Jr., Claremont, N. H.
Richardson, W., Kensington av., n. Town la., Phila., Pa.
Richmond, Wm. H., Scranton, Pa.
Ridge, J. & R., Nashua, N. H.
Ridgeway Bros., 9 Hill st., San Francisco, Cal.
Rieder, G. & J. Harg., 182 2d st., N. Y.
Rielly, E., 59 Ann st., N. Y.
Roebuck, B., Taunton, Mass.
Rothery, Augustus, Auburn, N. Y.
Rothery, J. & W., Matteawan, N. Y.
Rosendale, H., 1218 C st., Washington, D. C.
Roughedge, Peter, Watertown, N. Y.
Rowe, Jonas, 85 20th st., Detroit, Mich.
Ruerup, Henry, Allentown, Pa.
St. Louis File Co., St. Louis, Mo.
Seger, Ashworth & Co., Lowell, Mass.
Sampson, William, Watertown, N. Y.
Samson, Tom. C., Auburn, N. Y.
Sandusky File & Saw Works, Sandusky, O.
Sauerweln & Co., 1114 Cass av., St. Louis, Mo.
Sawyer File Co., Dorrance, c. Dyer st., Providence, R. I.
Schaeffing, J. & Bro., Columbus, O.
Scheifele, J., 1518 Frankford av., Phila., Pa.
Schmidt & Ecker, 1 Commercial st., Newark, N. J.
Schneider, Valentine, 92 Scholes st., B'klyn, N. Y.
Schreiber, A., Davenport, Ia.
Scranton Brass & File Works, Scranton, Pa.
Simon, C., Toledo, O.
Skinner, James (Agt.), 140 Fulton st., Boston, Mass.
Small, E. A., 63 S. Canal st., Chicago, Ill.
Smith, C. E. & Son, 182 Plymouth st., B'klyn, N. Y.
Smith, E. J., North English, Ia.
Smith, E. P., Muncie, Ind.
Smith, J. B., Rochester, N. Y.
Smith, J. Barton Co. (The), 4th, c. Somerset st., Phila., Pa.
Smyth & Sons, Church, c. Herkimer st., Albany, N. Y.
Southern File Works, Chattanooga, Tenn.
Spencer, A. F., Lancaster, Pa.
Stair, L. & Co., Peoria, Ill.
Standish File & Rasp Co., Hanson, Mass.
Steier, Louis & Co., Peoria, Ill.
Steinbeck & Bro., 3500 Germantown av., Phila., Pa.
Steinhauer, M., Indianapolis, Ind.
Stephen, Chas. & Co., Reading, Pa.
Stokes, T., 60 Avery st., Alleghany, Pa.
Stokes, W. H., Manalapan, N. J.
Stokes, W. & S., Tennent, N. J.
Stokes, S. & Son, Manalapan, N. J.
Stokes & Bro., Atlanta, Ga.
Stollatis, Albert, Erie, Pa.
Stone, Arthur, R., Lawrence, Mass.
Stott, G. F., 26 River st., Rochester, N. Y.
Stott, C. T., 198 Mill st., Rochester, N. Y.
Sturm & Newfield, South Bend, Ind.
Sunderland, J., Fall River, Mass.
Sunderland & Ogden, P, c. E. 1st st., Boston, Mass.
Syracuse File Works, Syracuse, N. Y.
Tamm, C., 2630 E. Cumberland st., Phila., Pa.
Temple & Lockwood, 12 Platt st., N. Y.
Thatcher File Co., Providence, R. I.
Thieme, Charles & Bros., 119 N. Front st., Balt., Md.
Thomas Bros., Canton, O.
Thomas, C., Birmingham, Conn.
Thomas, Chas., Ansonia, Conn.
Thomas, T. & Son, Canton, O.
Thornhill, R., Portland, Me.
Thrift File Works, 428 Ireland st., Phila., Pa.
Tomkinson, J. & R., Plymouth, N. H.
Trant, H., 39 Withers st., B'klyn, N. Y.
Troy File Works, Congress st., c. Marshall's Mills, Troy, N. Y.
Tucker, W. H., 46 Murray st., N. Y.
Turton, Thos. & Sons, 40 Kilby st., Boston, Mass.
Unglaub, C., Springfield, O.
Union File Works, 1013 Gilford av., Balt., Md.
Valley City File Works, Grand Rapids, Mich.
Van Cleve, E. E., 67 N. J. R. R. av., Newark, N. J.
Wall, P. H., 226 Union av., B'klyn, N. Y.
Walton, Samuel, Hudson, N. H.
Warner, H. H. & Co., Roxbury, Conn.
Webster File Works, Taunton, Mass.
Weed, Alfred & Co., 1605 Spring Garden st., Phila., Pa.
Weinmann, V., Paterson, N. J.
Were, J., Dayton, O.
Werner, John A., Reading, Pa.
Western File Co., Beaver Falls, Pa.; 121 E. Lake st., Chicago, Ill.
Widmer U., 1347 Crease st., Phila., Pa.
Wilde, P. & Co., 218 Fremont st., San Francisco, Cal.
Wood, J. H., 1629 N. 10th st., Phila., Pa.
Worcester File Works, Worcester, Mass.
Young & Co., Kokomo, Ind.
York Co. Fire Works, York, Pa.

Filters—Water.

Gate City Stone Filter Co., 46 Murray st., N. Y.
Hyatt Pure Water Co., Tribune Bldg., N. Y.
National Water Supply Co., Gazette Bldg., Cincinnati, O.

Fire Apparatus.

American Fire Hose Mfg. Co., 152 E. Lake st., Chicago, Ill.
Boston Woven Hose Co., 220-222 E. Lake st., Chicago, Ill.; Boston, Mass.

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Carleton, C. G. & Co., 206 E. Lake st., Chicago, Ill.
Chicago Hose Reel Co., 50 Michigan st., Chicago, Ill.
Eaton & Prince, 74 Michigan st., Chicago, Ill.
Fabric Fire Hose Co., 139 E. Lake st., Chicago, Ill.
Gleason & Bailey Mfg. Co. (Ltd.), Mercer, c. W. Houston st., N. Y.; 233 E. Lake st., Chicago, Ill.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Magneso Calcite Fire Proof Co., 175 Devonshire st., Boston, Mass.
Mutual Electric Mfg. Co., 20 Nassau st., N. Y.
New Haven Automatic Sprinkler Co., New Haven, Conn.
Preston, E. B. & Co., 415 5th av., Chicago, Ill.
Roberts, Geo. W. & Co., 144 E. Lake st., Chicago, Ill.
Silsby Mfg. Co. (The), 51 John st., N. Y.
Walworth Mfg. Co., 14-20 Oliver st., Boston, Mass.

Fire Brick & Clay Mfrs.

Ætna Fire Brick and Coal Co., Oak Hill, O.
Akron Fire Brick Co., Akron, O.
Alexander, T., 14 Reed st., Phila., Pa.
Allen, H., Iron Furnace, O.
Allison, B. M., Akron, O.
Anderson, Geo. H. & Co., Pittsburgh, Pa.
Anness, C. & Son, 6 Newark av., Jersey City, N. J.
Argrillo Works, Carbon Cliff, Ill.
Auld & Conger, Cleveland, O.
Baltimore Retort & Fire Brick Co., 20 S. Gay st., Balt., Md.
Bardolph Fire Clay Works, Bardolph, Ill.
Berry, J. S. & G. R., 436 Hamburg st., Balt., Md.
Berry, Wm. H. & Co., Woodbridge, N. J.
Berry & Ferguson, 41 Medford st., Boston, Mass.
Beverly, W. G., Portsmouth, O.
Birmingham Fire Brick Works, Birmingham, Ala.
Bissell, David S., 5-7 Bissell Blk., Pitts'bgh, Pa.
Blackmer & Post, 6th, c. Locust st., St. Louis, Mo. 18.
Blockmann & Cerf, 5 Drumm st., San Francisco, Cal.
Boice, F., Toledo, O.
Bolivar Fire Brick Co., 605 Smithfield st., Pitts'bgh, Pa.
Bolton, E., Mechanic, n. g. Division st., Troy, N. Y.
Borgner & O'Brien, 23d, ab. Race st., Phila., Pa.
Boston Fire Brick Works, 394 Federal st., Boston, Mass.
Brewer & Perrin, Springfield, O.
Brockett C. A., 800 Delaware st., Kansas City, Mo. 69.
Brooklyn Fire Brick Works, 88 Vandyke st., B'klyn, N. Y.
Browell, J., 727 Montgomery st., San Francisco, Cal.
Burns, Joseph, Hillsdale, Ind.
Burns, Collett & Co., Montezuma, Ind.
Calumet Fire Clay Co., 582 W. 6th st., Cincinnati, O.; Calumet, O.: 57 Kilby st., Boston, Mass.
Carthage Drain, Tile & Fire Brick Factory, Carthage, Ill.
Cecil Fire Brick Co., Northeast, Md.
Chaddock, S., 11 Devonshire st., Boston, Mass.
Chatfield, E. A., 90-94 State st., New Haven, Conn.
Chicago Retort & Fire Brick Works, Clark, c. 45th st., Chicago, Ill.
Chur, Augustus T., Potter Bldg, Park Row, N. Y.
Cincinnati Gas Retort & Fire Brick Co., Burns st., Cincinnati, O.
Clark, Ansel, 13 Water st., Norwich, Conn.
Clark, H. D. & Co., 961 Grand st., New Haven, Conn.
Classen, H. W. & Co., 515 S. Howard st., Balt., Md.
Clark, N. & Sons, 22 California st., San Francisco, Cal.
Clark, Wm. Worth & Son, 115 S. Gay st., Balt., Md.
Cleveland Diamond Fire Brick Works, Cleveland, O.
Calahan, J., 319 Columbus st., Cleveland, O.
Coffin T. & Co. (Ltd.), Douglas st., n. Wabash R. R., St, Louis, Mo.
Colson, Chas, D., 20 W, Lake st., Chicago, Ill.
Columbus Sewer Pipe Co., Columbus, O.
Coney, M. R., 626 Main st., Cincinnati, O.
Conkling, H. J., 152 E. Pearl st., Cincinnati, O.
Connelly, Thos., 12 4th av., Chicago, Ill.
Cooper, J., 413 Oakland st., B'klyn, N. Y.
Copeland, J. C., 162 S. St. Paul st., Rochester, N. Y.
Cramer, G. R., 390 Central av., Cincinnati, O.
Crane, J. V. & Bro., 7th st., c, Free. av., Cincinnati, O.
Crawford, Geo. & Co,, 209 Walnut st., Cincinnati, O.
Cuba & Leaman Con. Clay Works, Crystal Lake Crossing, Ill.
Cummings, L. C. & Co., Portland, Me.
Darrow, M., New London, Conn.
Davis & Cowell, 211 Drumm st., San Francisco, Cal.
Degnan, P, & T., Toledo, O.
Dell, F, M., Indianapolis, Ind.
Denver Fire Brick Co., Denver, Col.
Derache & Lapersonneric, 250 W. 70th st., N. Y.
Diamond Fire Brick Co. (Ltd.), 93 4th av., Pittsburgh, Pa.
Dighton Stove Lining Co., Dighton, Mass.
Dixon & Howard Clay Mfg. Co., 97 Dearborn st. (Room 6), Chicago, Ill.
Dover Fire Brick Co., 44 Mercantile Bank Bldg., Cleveland, O.
Downing, Joseph, Allentown, Pa.
Dugan, M., 8th, c. Baymiller st., Cincinnati, O.
Dunn, Wm. T. & Co., 219-221 Lacock st., Allegheny, Pa.
Eckert, Geo. J., Reading, Pa.
Eichelberger, T. D. & Sons, Dayton, O.
Erskine, J., Lowellville, O.
Etting, E. J., 223 S. 3d st., Phila., Pa.
Evans & Howard Fire Brick Co., 916 Market st., St. Louis, Mo.
Farrington & Son, Elmira, N. Y.
Fiske, Coleman & Co., 62 Congress st., Boston, Mass.
Fleming, H., 23 Liberty st., N. Y.
Fossill Meal Co., 48 Cedar st., N. Y.
Foundry Supply Co., 15 Oliver st., Boston, Mass.
Fox, John O. & Co., Putnam, Conn.
Garden City Sand Co., 38 W. Van Buren st., Chicago, Ill.
Gardner, James, Ellerslie, Md.
Gardner, Jas., 91 5th av., Pittsb'gh, Pa.
Gardner, J., Jr., 605 Smithfield st., Pittsb'gh, Pa.
Garfield, Fertig & Co., 65 Sandusky st., Allegheny, Pa.
Gautier, J. H. & Co., Greene, c. Essex st., Jersey City, N. J.
Genoa & Rocky Ridge Lime Co., Toledo, O.
Gera, I. M., Syracuse, N. Y.
Goff, J. C., 66 S. Water st., Providence, R. I.
Goff & White, 2-6 Point st., Providence, R. I.
Gosline & Barbour, Toledo, O.
Goss & Gleason, Vergennes, Vt.
Graham & Dougherty, Dayton, O.
Great Western Fire Clay Co., Court, c. Franklin st., Buffalo, N. Y.
Green Hill Fire Brick Co., Northeast, Md,
Green, Marquis & Co., Lowellville, O.
Hadfield & Co., 113 N. Clinton st., Chicago, Ill.
Haig, T., 978 N. 2d st., Phila., Pa.
Hall, J. D, & Co., 212 S. 3d st., Phila., Pa,
Hall & Son, 69 Tonawanda st., Buffalo, N. Y.
Ham & Carter, 730 Albany, st., Boston, Mass.
Hamilton, S. M. & Co., 8 S. Gay st., Balt., Md.
Hammer, J., Council Bluffs, Ia.
Hammil & Gillespie, 240-242 Front st., N. Y.
Harbison & Walker, 22d, c. Railroad st., Pittsburgh, Pa.
Harris, W. W., 142 3d st., Louisville, Ky.
Harrisburg Fire Brick Works, Harrisburg, Pa.
Hatfield & Phillips, Alexandria, Pa.
Hayden, P. & Sons, Columbus, O.

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Haydenville Mining & Mfg. Co., 1619 to 1625 State st., Chicago, Ill.; Haydenville, O.
Haws, A. J. & Son, Johnstown, Pa.
Heames, W. E. & Co., 75 W'dbridge st., Detroit, Mich.
Hendrickson, I. C., 237 B'way, N. Y.
Henry, W. D. & Co., 127 5th av., Pittsb'gh, Pa.
Hine, W. H. & G., New Milford, Conn.
Hocking Valley Fire Brick Co., Logan, O.
Hoeft & Michaelsoc, Harrison, n. 18th st., San Francisco, Cal.
Homan, C. A., Winchester, Mass.
Howard, Childs & Co., 91 5th av., Pittsb'gh, Pa.
Hoxiet, W. & Co., 236 State st., Boston, Mass.
Hull, G. H. & Co., Kenyon Bldg., Louisville, Ky.
Hunt Fire Brick Co., Nashua, N. H.
Hyzer & Lewellen, 952 N. 9th st., Phila., Pa.
Iliff, C. E. & Co., 8th, c. Eggleston av., Cincinnati, O.
Iowa Pipe & Tile Co., Des Moines, Ia.
Ironton Fire Brick Co., Ironton, O.
Jackson Fire Clay Co., Jackson, Mich.
Jenkins, Reuben, 58 S. Clinton st., Chicago, Ill.
Johnson, E. E., East Saginaw, Detroit, Mich.
Joliet Mound Co., Joliet, Ill.
Jones, R. H. F., 509 Olive st., St. Louis, Mo.
Kansas City Frear Stone & Pipe Mfg. Co., Kansas City, Mo.
Kent & Morduc, Kenyon Bldg., Louisville, Ky.
Keystone Fire Brick Co., 4934 Germantown av., Phila., Pa.
Kier Bros., 1029 Penn av., Pittsb'gh, Pa.
Kreischer, B. & Sons, 132 Mangin st., N. Y.
Lacey, Wm., 77-79 River st., Cleveland, O.
Laclede Fire Brick Mfg. Co., 901 Pine st., St. Louis, Mo.
Lamoine, N. A. & Bro., Bath, Me.
Lane, W. E., 605 Kearny st., San Francisco, Cal.
La Salle Drain, Tile & Brick Co., La Salle, Ill.
Leffler & Bland, Marion, O.
Leggett, Wm. T., 1025 Liberty av., Pittsburgh, Pa.
Lehigh Fire Brick Co., Catasauqua, Pa.
Lenz, Emil, 4 Stone st., N. Y.
Leonard Bros., Canton, O.
Ligonier Fire Clay & Brick Co., Ligonier, Pa.
Loughridge & Bond, 2313 N. 7th st., Phila., Pa.
Lyth, J. & Sons, 48 W. Eagle st., Buffalo, N. Y.; Wellsville, O.
McCammon, L. H., 582 W. 6th st., Cincinnati, O.
McClure, J., Dayton, O.
McCracken, J. E., Front, c. Pike st., Cincinnati, Ohio.
McDonough, J., Grand Rapids, Mich.
McHenry, J., 2310 Washington av., Phila., Pa.
McHose & Co., Reading Pa.
McKallip, L. S. & Co., 12th, c. Pike st., Pittsburg, Pa.
McLeod, H. S., 345 1st st., Troy, N. Y.
McNamee, R. & Co., 234 Broadway, N. Y.
Magee, E. & Co., 82 Park way, Alleghany, Pa.
Mandery, L., 156-158 S. St. Paul st., Rochester, N. Y.
Massillon Stone & Fire Brick Co., 933 Penn av., Pittsburgh, Pa.; Massillon, O.
Maurer, Henry & Son, 420 E. 23d st., N. Y.
Meeker & Carter, 206 B'way, N. Y.
Messner & Co., Cedar Rapids, Ia.
Middlesex Co. (The), South Amboy, N. J.
Miller, J. B. & Son, Sligo, Pa.
Minor, Porter & Co., McCoy's Station, O.
Missouri Fire Brick Co., Pacific, Mo.
Mitchell Clay Mfg. Co., 20 S. 11th st., St. Louis, Mo.
Montague & Co., Chattanooga, Tenn.
Moore, George S., 423 W. Main st., Louisville, Ky.
Moores & Co., 263 Plum st., Cincinnati, O.
Muscatine Star Tile Co., Muscatine, Ia.
New Haven Fire Brick Co., 17 Kossuth st., New Haven, Conn.
Newton & Co., Rathbone st., ab. N. Ferry, Albany, N. Y.
Nicolai, John V., Elm, c. Water st., Cincinnati, Ohio.
Niles Fire Brick Co., Niles, O.
Noble & Co., ft. 1st st., Detroit, Mich.
Northrup, L. D. & Co., Hamilton, O.
Oak Hill Fire Brick & Coal Co., Oak Hill, O.
Olson, J. & Co., 14 Chrystie st., N. Y.
Ostrander, James & Son, Troy, N. Y.
Ottawa Fire Clay & Brick Co., Ottawa, Ill.
Ottawa Tile Co., Ottawa, Ill.
Palmer, R. H. & Sons, Pittsburgh, Pa.
Parker-Russell Mining & Mfg. Co., 711 Pine st., St. Louis, Mo.
Patchen, G. M., 69 E. Front st., Cincinnati, O.
Patterson, S. J., Dayton, O.
Pease, A. G. & R. A., Middletown, Conn.
Peck, Seth L., Central Whf, Norwich, Conn.
Penna. Mfg., Mining & Supply Co., 1004 Penn av., Pittsb'gh, Pa.
Penna. Retort & Fire Brick Works, 212 S. 2d st., Phila., Pa
Perkins, H. A., Stamford, Conn.
Peteas, J., Jr., Coal Grove, O.
Phila. Fire Brick & Clay Retort Works, 2306 Vine st., Phila., Pa.
Polster & Co., 2620 Edgemont st., Phila., Pa.
Portland Stone Ware Co., 8 Liberty sq., Boston, Mass.; n. end Deering Bridge, Portland, Me.
Portsmouth Fire Brick Co., 58 S. Clinton st., Chicago, Ill.; Portsmouth, O.
Prentice & Hackett, 1009 Liberty st., Pittsb'gh, Pa.
Presbrey Stove Lining Co., Taunton, Mass.
Raritan, Hollow & Porous Brick Co., 115 B'way, N. Y.
Raymond Bros., 10 Washington st., Norwalk, Conn.
Reese, Hammond & Co., Bolivar, Pa.
Remmey, Richard C., 2637-2659 E. Cumberland st., Phila., Pa.
Richards Bros., 107 Dearborn st., Chicago, Ill.
Rimington, S. A., 40 B'way, N. Y.
Rittenhouse, N. M., ft. Cross st., Balt., Md.
Ritter & Taylor, Allentown, Pa.
Rhoads & Ramsey Co., 107 La Salle st., Chicago, Ill.
Roberts & Bro., South Amboy, N. J.
Robertson & Frost, New Lisbon, O.
Ross, J. A., 141 Erie st., Buffalo, N. Y.
Ross, W. E., 144-146 Webster st., Allegheny, Pa.
Rucker & Co., Greenfield, O.
Russell, J. W. & Co., Wellsville, O.
Rutland Fire Clay Co., Rutland, Vt.
Salamander Works, 61-63 Bethune st., N. Y.
Savage Fire Brick Co., 3 Smithfield st., Pittsb'gh, Pa.
Sayre, J. R., Jr., Co., River & Centre sts., Newark, N. J.
Sayre & Fisher Co., River, n. Centre st., Newark, N. J.
Scioto Star Fire Brick Works, Portsmouth, O.
Scott, W. A. & Son, Pittsburgh, Pa.
Shepard, J. J., 35-39 River st., Cleveland, O.
Sick, W., High Hill, Mo.
Smith, A. F. & Co., New Brighton, Pa.
Soisson, J., Connellsville, Pa.
Soisson & Kilpatrick & Co., Connellsville, Pa.
Somerset Potters Works, 52 N. Main st., Providence, R. I.; 39 Commercial Wharf, Boston, Mass.
Speed, J. B. & Co., 331 W. Main st., Louisville, Ky.
St. Louis Clay Mfg. Association, St. Louis, Mo.
Stamford Fire Brick & Stove Lining Works, Canal Dock, Stamford, Conn.
Standard Gas Retort & Fire Brick Co., Ironton, Ohio.
Staples Bros., School st., Lowell, Mass.
Starr, C. A. & Co., Dayton, O.
Stearns & Co., 248 E. Lake st., Chicago, Ill.
Stueve, H., 534 John st., Cincinnati, O.
Stevens Fire Brick Co., Birmingham, Ala.
Stevens & Thompson, Bennington, Vt.
Sweeny, G. & Co., 1334 Ridge av., Phila., Pa.
Taylor, C., Burns st., 21st Ward, Cincinnati, O.
Taylor, C. C. & Son, Springfield, O.
Taylor, J. & Co., 118 Market st., San Francisco, Cal.
Taylor & Bullock, 935 Liberty av., Pittsburgh, Pa.
Taunton Stove Lining Co., Taunton, Mass.
Tennessee Coal & Fire Clay Works, Tennessee, Ill.

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Townsend, T. B. & Co., Zanesville, O.
Trenton Fire Brick Co., Trenton, N. J.
Troy Fire Brick Works, 309-311 2d st., bet. Canal av., Troy, N. Y.
Trenton Terra-Cotta Co., Trenton, N. J.
Troy Stove Lining & Fire Brick Works, 1st, c. Monroe st., Troy, N. Y.
U. S. Fire Clay Co., New Lisbon, O.
United States Fire Clay Co. (The), Wilshire Bldg., Cleveland, O.
Union Mining Co., 222 S. 3d st., Phila., Pa.
Union Stove Lining Co., Taunton, Mass.
Valentine, M. D. & Bro., Woodbridge, N. J.
Van Dusen, H. K., Chippewa, n. Lombard st., Phila., Pa.
Waldo Bros., 88 Water st., Boston, Mass.
Walker, N. U., Clay Mfg. Co., 10th, c. Penn av., Pittsb'gh, Pa.; Walkers, O.
Wassall Fire Clay Co., Columbus, O.
Watson Fire Brick Co., Perth Amboy, N. J.
Weber, Adam, 633 E. 15th st., N. Y.
Webster Fire Brick & Coal Co., Iron Furnace, O.
Welch, Palmer & Maxwell, 507 Hamilton Bldg, Pittsb'gh, Pa.
Welch, Jas. H. & Bro., Pitts'bgh, Pa.
Welch, Gloninger & Co., 6th av., c. Grant st., Pittsb'gh, Pa.
West Virginia Fire Brick Co., 3 Smithfield st., Pitts'bgh, Pa.
Weyand, J., Dayton, st., c. Fremont av., Cincinnati, O.
Wilson, William L. (Ltd.), 507 Chestnut st., Phila., Pa.
Wheeler & Howes, E. End Center Bridge, Bridgeport, Conn.
White, Edward D. & Co., 88 Vandyke st., B'klyn, N. Y.
White, N. A. & Sons, Utica, N. Y.
Whitehall Fire Clay Works, 286 S. Canal st., Chicago, Ill.
Whitehead Bros., 184 Dyer st., Providence, R. I.
Whitmore, W. M. & Co., Dayton, O.
Williams, J. R., Taunton, Mass.
Williams, N. A., 219 E. Washington st., Chicago, Ill.
Williams & Hess, Ottawa, Ill.
Wilson, Thomas, New Brighton, Pa.
Wood Bros., 40 Michigan av., Cleveland, O.
Woodland Fire Brick Co., 22d, c. Railroad st., Pittsb'gh, Pa.
Worcester, Francis, 106 5th av., Chicago, Ill.
Wright & Knauff, Ætna, n. C. & P. R. R., Cleveland, O.
Yates, J. V. N., 78 Viaduct st., Cleveland, O.
Young, Arthur & Co., 54 Kilby st., Boston, Mass.

Fire Extinguishers.

Ansley & Loutrel, 60 Cedar st., N. Y.
Automatic Chemical Fire Extinguisher Co., 89 E. Randolph st. (Room 36), Chicago, Ill.
Automatic Fire Alarm & Extinguisher Co. (Ltd.), 294 B'way, N. Y.
Automatic Fire Protection Co., 48 Pine st., N. Y.
Babcock Fire Extinguisher, 351 Canal st., N. Y.
Barnes, Charles & Co., 40 Sycamore st., Cincinnati, O.
Bishop, J., r. 59 Ann st., N. Y.
Bishop, J. W., 477 State st., New Haven, Conn.
Brown, D. S. & Co., 36 California st., San Francisco, Cal.
Buell Electrical & Hydraulic Mfg. Co., 171 B'way, N. Y.
Buell, F. R., 44 N. 4th st., Phila., Pa.
Buffington, N. M., 177 La Salle st. (Room 33), Chicago, Ill.
California Wire Works, 6 California st., San Francisco, Cal.
Campbell, W. W., 85 Liberty st., N. Y.
Clark, Lawrence W., 319 B'way, N. Y.
Climax Fire Extinguisher, 221 Sansome st., San Francisco, Cal.
Chapman, J. G., 62 Orange st., New Haven, Conn.
Chemical Hand Fire Extinguisher Co., 3 Studio Bldg., Boston, Mass.
Concord Mfg. Co., 160 Congress st., Boston, Mass.
Connelly, J. H. & Son, 3301 Smallman st., Pittsburgh, Pa.
Crikelair, Gustav J., 3 State st., N. Y.
Curtis, W. B. & Co., Danbury, Conn.
Doolittle, Hiram L., 1 B'way, N. Y.
Dyer Railway, Automatic Fire Extinguisher Co., 294 Clark st., Chicago, Ill.
Edison Fire Extinguisher Co., 15 Cortlandt st., N. Y.
Fire Extinguisher Mfg. Co., 15 Cortlandt st., N. Y.; 41 Federal st., Boston, Mass.; 315 S. Desplaines st., Chicago, Ill.
Foskett & Bishop, 462 State and Grand sts., c. Railway av., New Haven, Conn.
Gray, Toynton & Fox, 20 Woodbridge st., E., Detroit, Mich.
Holloway, C. T., 17 South st., Balt., Md.
Holloway Fire Extinguisher, 298 B'way, N. Y.
Harden Hand Grenade Fire Extinguisher Co., 1 B'way, N. Y.; 51 Dearborn st., Chicago, Ill.
Harden Star Hand Grenade Fire Extinguisher, 8 Oliver st., Boston, Mass.
Harkness Fire Extinguisher Co., 76 Pearl st., Boston, Mass.
Harkness, Smith & Wise, 77 W. Houston st., N. Y.
Hayward, S. F. & Co., 351 Canal st., N. Y.
Imperial Fire Extinguisher Co., 241 B'way, N. Y.
Jennings, J. F., 337 Main st., Bridgeport, Conn.
Johnson, W. H., 39 S. 4th st., Phila., Pa.
Kane, W., 302 Chestnut st., Phila., Pa.
Lewis Hand Fire Extinguisher Co., 38 La Salle st., Chicago, Ill.; 151 Congress st., Boston, Mass.
Lovering, Geo. & Co., 925 Chestnut st., Phila., Pa.
Long, J. E., Fire Extinguisher Co., 45 B'way, N. Y.
Malcomber & Bartlett, 42 Hudson av., Albany, N. Y.
Mfrs. Fire Equipment Co., 155 B'way, N. Y.
Mitchell & Woodruff, 108 West Pearl st., Cincinnati, O.
N. Y. and New Haven Automatic Sprinkler Co., 317 B'way, N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Peto, T., 217 N. 10th st., Phila., Pa.
Platt, W. K. & Co., 36 S. 4th st., Phila., Pa.
Protection Mfg. Co., 44 N. 4th st., Phila., Pa.
Sellers & Co., Wm., Phila., Pa.
Theberath, J. H., 262 S. 7th st., Newark, N. J.
U. S. Supply Co. (Ltd.), 51 John st., N. Y.
Wheeler, L. H., 68 Pearl st., Boston, Mass.
Woodhouse, D. A., Mfg. Co., 12 Barclay st., N. Y.

Fireproofing Material.

Parker-Russell Mining and Mfg. Co., 711 Pine st., St. Louis, Mo.

Fish Plates.

Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.; Louisville, Ky.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Cumberland Rolling Mill, Mt. Clare, Balt., Md.
Diamond State Iron Co., Wilmington, Del.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Helmbacher Forge and Rolling Mills Co., St. Louis, Mo.
Houston Rolling Mills, Houston, Tex.
Keefer, Horace & Co., Kansas City, Mo. 88.
Knoxville Iron Co., Knoxville, Tenn.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Louisville Steam Forge Co., Louisville, Ky.
New Albany Rail Mill Co., New Albany, Ind.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Portland Rolling Mill, Portland, Me.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Riverside Iron Works, Wheeling, W. Va.
Springfield Iron Co.'s Iron and Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.

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Spuyten Duyvil Rolling Mill (Welch & Barnum), 11 Pine st., N. Y.
Tidewater Steel Works, Combination Steel and Iron Co., Chester, Pa.
Tredegar Iron Works, Richmond, Va.
Tudor Iron Works, St. Louis, Mo.
Troy Steel and Iron Co., Troy, N. Y.; 26 Broadway, N. Y.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Western Iron Co., Rosedale, Kan.
Winch's Rolling Mills, Spike and Bolt Works, Phila., Pa.

Fittings—Brass.

Cleveland Gas Fixture Mfg. Co. (The), 396-398 Superior st., Cleveland, O.
Greengard, M. D., St. Louis, Mo.
Mayor, Lane & Co., 119 Walker st., N. Y.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Morse, Jas. O., 76 John st., N. Y.
Newman, S., 160 Main st., Cincinnati, O.
Oxley, Giddings & Enos, 224 Canal st., N. Y.
Springfield Brass Co., 80-84 Limestone st., Springfield, O.
Taws & Hartman, 1233-1237 N. Front st., Phila., Pa.

Flanges—Cast Iron.

Arthur Co. (The), 93 William st., N. Y.
Ashwell, Henry A., 132 Centre st., N. Y.
Carroll, D. W. C. & Co., 310 Liberty st., Pittsb'gh, Pa.
Danner, A. C., Mobile, Ala. **69.**
Koch, G. W., 168 W. 34th st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Gilbert Bros., Bethel, Conn.
Warren, G. F. Mfg. Co. (The), 212 East st., New Haven, Conn.

Floor Plates.

Griffing Iron Co., A. A., 449 Comm. av., Jersey City, N. J. **78.**

Flue Cleaners.

McLaughlin, Geo. G. Mfg. Co., 49 Haverhill st., Boston, Mass.
United States Fire Clay Co., Wilshire Bldg., Cleveland, O.

Flue Linings.

Bardolph Fire Clay Works, Bardolph, Ill.
Haydenville Mining & Mfg. Co. (The), Haydenville, O.
Iowa Pipe & File Co., Des Moines, Iowa.

*Fog Horns.

Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.

Forges.

Ajax Forge Co., S. Hayne av., c. Blue Island av., Chicago, Ill.
Altoona Bloom Iron Works (G. W. & F. Palmer & Co.), Alder Bend, N. Y.
Baugh Steam Forge Co., Detroit, Mich.
Beandry & Cunningham, 70 Kilby st., Boston, Mass.
Beecher & Peck, New Haven, Conn.
Bell, Thos. J. & Co., S. E. c. 2d & B'way, Cincinnati, O.
Billings & Spencer Co., Hartford, Conn.
Bridgeport Forge Co., Bridgeport, Conn.
Buffalo Forge Co., 482 B'way, N. Y.
Bullock, T. H. Bellows & Forge Co., 130 Columbus st., Cleveland, O.
Carnegie, Phipps & Co., Pittsburgh, Pa.; 209 & 207 La Salle st., Chicago, Ill.; 15 Broad st., N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Chateaugay Ore & Iron Co., Plattsburg, N. Y.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Childs, Henry, Main, c. Seneca st., Buffalo, N. Y.
Cincinnati Plow & Bellows Works, 614 Main st., Cincinnati, O.
Cleveland City Forge & Iron Co., 101 St. Clair st., Cleveland, O.
Cooke & Co., 22 Cortlandt st., N. Y.
Crown Point Iron Co., Crown Point, N. Y.
Dickson Mfg. Co., Scranton, Pa.
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
East Middlebury Iron Works, Williams & Nichols, E. Middlebury, Vt.
Empire Portable Forge Co., Cohoes, N. Y.
English, C. L., cor. Court st. & McLean av., Cincinnati, O.
Godney & Storm, 47 Michigan st., Chicago, Ill.
Holt Mfg. Co., Cleveland, O.
Horicon Iron Co., 24 Cliff st., N. Y.
Keene Forge (W. F. & S. H. Weston), Keene, N. Y.
Keystone Portable Forge Co., 204 N. 4th st., Phila., Pa.
Kimmswick Forge, Kimmswick, Mo.
King's Works, Shady, Tenn.
Lilly, Rob., Bath, Me.
Little Doe Forge (Wm. A. Morley), High Heath, Tenn.
Louisville Steam Forge Co., Louisville, Ky.
McLauthlin, Geo. T. & Co., 120 Fulton st., Boston, Mass.
McPherson, Willard & Co., Bordentown, N. J.
McQueen's Forge (Isaac McQueen), Baker's Gap, Tenn.
Mahon, John G. & Co., 11 Illinois st., Chicago, Ill.
Morrison's Forge (Nat. Morrison), Head of Laurel P. O., Tenn.
Mud Splatter Forge (M. M. Wagner's Sons), Howard Iron Works P. O., Tenn.
O'Leary, A. J., 136 W. Lake st., Chicago, Ill.
Payne's Forge (D. F. Payne), Wadham's Mills, N. Y.
Peru Steel Ore Co. (Ltd.), Clintonville, N. Y.
Peterburg Iron Works (Peter Tremblay), Clayburg, N. Y.
Raymond, C. M., West Middlesex, Pa.
Rhea's Forge (Dr. Rob't C. Rhea), Shoun's Cross Roads, Tenn.
Roan Mountain Steel & Iron Co., Wilders, N. C.
Roan's Creek Forge (B. R. Brown), Shoun's Cross Roads, Tenn.
Rockaway Direct Process Iron & Steel Co., 32 Warren st., N. Y.
Rocky Point Forge (Dr. J. W. Patton), Murphy, N. C.
St. Louis Malleable Iron Co., 2106-2128 Market st., St. Louis, Mo.
Sable Iron Works, J. & J. Rogers Iron Co., Ausable Forks, N. Y.
Sand Hill Forge (Daniel Slimp), Baker's Gap, Tenn.
Shaw, J. H., Meriden, Conn.
Star Iron Works, Bowen & Signor, Saranac, N. Y.
Starr, Oliver A., 18 Devonshire st., Boston, Mass.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Tom's Creek Forge (J. L. & D. W. Worth), Tom's Creek, N. C.
Union Drop Forge Co., 60-70 Ohio st., Chicago, Ill.
Union Steam Forge, Bordentown, N. J.
Wilkinson, A. J., 184-188 Wash'n st., Boston, Mass.
Wilmington Forge W. F. & S. H. Weston, Wilmington, N. Y.
Wood, Wm. W., Wood's Falls, N. Y.

Forges—Portable.

Andres, H., 22 N. 4th st., Phila., Pa.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Bradley & Co., Syracuse, N. Y.
Brown & King, Atlanta, Ga.
Brown & Patterson, Marcy av., B'klyn, N. Y.
Buckeye Portable Forge Co., Cleveland, O.
Buffalo Forge Co., Buffalo, N. Y.

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Bullock, T. H., Cleveland, O.
Champion Blower & Forge Co., 26 E. James st., Lancaster, Pa.
Chicago Scale Co., 147-151 S. Jefferson st., Chicago, Ill.
Cincinnati Plow and Bellows Works, 614 Main st., Cincinnati, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Cleveland Steam Gauge Co., 211 Superior st., Cleveland, O.
Cooke & Co., 22 Cortlandt st., N. Y.
Dangler Vapor Stove and Refining Co., 311 State st., Chicago, Ill.
Empire Portable Forge Co., Cohoes, N. Y.
Fairbanks & Co., 311 B'way, N. Y.
Foos Mfg. Co., Springfield, O.
Garrett, W. T. & Co., San Francisco, Cal.
Hotchkiss, Guy C., Field & Co., 624 E. 14th st., N. Y.
Kellogg, Warren T., Cohoes, N. Y.
Keystone Portable Forge Co., 204 N. 4th st., Phila., Pa.
Mead, I. V., 370 av. A, n. 23d st., N. Y.
Roots, P. H. & F. M., Connersville, Ind.
Star Machine Co., 190 Terrace st., Buffalo, N. Y.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Wilkinson, A. J. & Co., 184-188 Washington st., Boston, Mass.
York, S. M., 44 S. Water st., Cleveland, O.

Forgings—Engine and Machinery.

Ajax Forge Co., 183 Dearborn st. (Room 6), Chicago, Ill.
American Bolt Co., 270 Lawrence st., Lowell, Mass. **24.**
Beecher & Peck, River, c. Lloyd st., New Haven, Conn.
Billings & Spencer Co. (The), Hartford, Conn.
Bridgeport Forge Co. (The), ft. Howard av., Bridgeport, Conn.
Booth, J. N., Birmingham, Conn.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Carnegie, Phipps & Co. (Ltd.), 205 La Salle st. (Room 209), Chicago, Ill.
Charbonneau, J., 68 W. Wash'n st., Chicago, Ill.
Chicago Crucible Steel Casting Co., 1326 Indiana av., Chicago, Ill.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Cleveland City Forge & Iron Co., Cleveland, O.
Concord Axle Co., Penacook, N. H.
Duffy, Jas. J., Waterbury, Conn.
Ensign Mfg. Co. (The), Huntington, W. Va.
Ewald Iron Co., St. Louis, Mo.
Farist Steel Co. (The), 45 E. Main st., Bridgeport, Conn.
Ferracute Machine Co., Bridgeton, N. J. **15.**
Godey & Strom, Hawthorn av., c. Rees st., Chicago, Ill.
Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. **7.**
Jackson & Woodin Mfg. Co., Berwick, Pa.
McKee, Fuller & Co., Catasauqua, Pa.
Mansfield Elastic Frog Co., 334-356 Congress av., New Haven, Conn.
Milton Iron Co., Milton, Pa.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Moyer, H. A., Syracuse, N. Y.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
New Albany Steam Forge, Water, n. Upper 6th st., New Albany, Ind.
New York Plow Co. (The), 57 Beekman st., N. Y.
O'Leary, A. J., 136 W. Lake st., Chicago, Ill.
Otis Iron & Steel Co., Cleveland, O.
Parker, Hiram, Gurleyville, N. Y.
Parker Bros., Meriden, Conn.
Pendleton, James, Elizabeth st., Erie Basin, B'klyn, N. Y.
Pittsburgh Mfg. Co., Railroad, n. 28th st., Pittsb'g, Pa.
Providence Steam Engine Co., 373 S. Main st., Providence, R. I.
Robinson-Rea Mfg. Co., Pittsb'g, Pa.
Rock Island Arsenal, Rock Island, Ill.
Shaw, John H., 21 South Colony st., Meriden, Conn.
Stiles & Parker Press Co. (The), Middletown, Conn.
Tubular Barrow and Machine Co., 169 14th st., Jersey City, N. J. **32.**
Union Drop Forge Co., 64 E. Ohio st., Chicago, Ill.
Waterbury Steam Boiler Works, Waterbury, Conn.
Weed Sewing Machine Co., Hartford, Conn.
Williams, J. H. & Co., 9-15 Richards st., B'klyn, N. Y.
Willard Sons & Bell Co. (The), 138 E. Jackson st., Chicago, Ill.
Wyman & Gordon, Worcester, Mass.

Forgings—Drop.

Beecher & Peck, New Haven, Conn.
Belden, R. A. & Co. (The), Danbury, Conn.
Billings & Spencer Co. (The), Hartford, Conn.
Boone, W. C. & Son, B'klyn, N. Y.
Brown, R. H. & Co., New Haven, Conn.
Merrill Bros., 26 1st st., B'klyn, N. Y.
Philadelphia Drop Forge Co., 1229 Callowhill st., Philadelphia, Pa.
Rose, Wm. & Bros., W. Phila., Pa.
Scranton Forging Co., Scranton, Pa.
Weed Sewing Machine Co., Hartford, Conn.
Williams & Co., J. H., 15 Richards st., B'klyn, N. Y.
Wyman & Gordon, Worcester, Mass.

Forgings—Engine.

Buffalo Steam Forge, 24 Hayen Bldg, Buffalo, N. Y.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Carnegie, Phipps & Co. (Ltd.), 48 4th av., Pittsb'g, Pa.
Eastern Forge Co., Mason Bldg., Boston, Mass.
Hicks & Dickey, Phila., Pa.
McKee, Fuller & Co., Catasauqua, Pa.
Marchessault, C., Minneapolis, Minn.
Miller Forge Co., Pittsb'g, Pa.
Scranton Forging Co., Scranton, Pa.

Forgings—Iron.

Bridgeport Forge Co. (The), Bridgeport, Conn.
Bridgewater Iron Co., Bridgewater, Mass.
Dickson Mfg. Co., Scranton, Pa.
Eastern Forge Co., 416 Fore st., Portland, Me.
Fox & Son, Geo., 509 W. 34th st., N. Y.
Hicks & Dickey, 413 Commerce st., Phila., Pa.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Knoxville Iron Co., Knoxville, Tenn.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, Ohio.
Miller, Wm. Son & Co., Duquesne Way & Fort st., Pittsb'gh, Pa.
Milton Rolling Mill & Steam Forge (Milton Iron Co.), Milton, Pa.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
New Albany Forge & Rolling Mill Co., New Albany, Ind.
Paterson Iron Co., Paterson, N. J.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Standard Iron Co., 4th st. & 9th av., S. Minneapolis, Minn.
Stuebner & Woods, 168 E. 3d st., L. I. City, N. Y.
Vulcan Forge & Iron Works (Long & Co.), Pittsburgh, Pa.
Vulcan Iron Co., Richmond, Va.
Western Forge & Rolling Mills, 210 N. 35th st., St. Louis, Mo.

Forgings—Railroad.

Akron Steam Forge Co., Akron, O.
Allison Mfg. Co., 32d & Walnut sts., Phila., Pa.
Baugh Steam Forge Co., Detroit, Mich.
Birmingham Iron Foundry, Birmingham, Conn.
Buck & Co., M. M., 209 N. 35th st., St. Louis, Mo.
Cape Ann Anchor Works, Mason Bldg., Boston, Mass.
Carnegie Bros. & Co., Pittsb'gh, Pa.

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Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Cayuta Wheel & Foundry Co., Sayre, Pa.
Central Iron & Steel Co., Brazil, Ind.
Chicago Forge & Bolt Co., 234 Clark st., Chicago, Ill.
Cleveland Rolling Mill Co., Cleveland, O.
Dickson Mfg. Co., Scranton, Pa.
Duluth Forge Co., Duluth, Minn.
Eastern Forge Co., 416 Fore st., Portland, Me.
Ensign Mfg. Co. (The), Huntington, W. Va.
Excelsior Foundry and Machine Works, Birmingham, Ala.
Farist Steel Co. (The), 45 E. Main st., Bridgeport, Conn.
Frankford Steel Co., Frankford st., Phila., Pa.
Harrisburg Car Mfg. Co, Harrisburg, Pa. **7.**
Helmbacher Forge & Rolling Mills Co., Barton and DeKalb sts., St. Louis, Mo.
Hinkley Locomotive Co., Boston, Mass. **62.**
Hoopes & Townsend, Phila., Pa.
Hussey, Howe & Co., L. H., Pittsburgh, Pa.; 3 Clifford st., N. Y.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Kinsley Iron & Machine Works, Canton, Mass.
Knoxville Car Wheel Co., Knoxville, Tenn.
Knoxville Iron Co., Knoxville, Tenn.
Lebanon Mfg. Co., Lebanon, Pa.
Louisville Steam Forge Co., Louisville, Ky.
McKee, Fuller & Co., Catasauqua, Pa.
Michigan Car Co., Detroit, Mich.
Middleton Car Works, York, Pa. **65.**
Midvale Steel Co. (The), Nicetown, Phila., Pa.
Missouri Valley Bridge and Iron Works, Leavenworth, Kan.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
New Albany Steam Forge Co., New Albany, Ind.
N. Y. Central Iron Works, Geneva, N. Y.
Offutt & Co., c. Church and Rector sts., N. Y.
Ohio Falls Car Co., Jeffersonville, Ind.
Otis Iron and Steel Co., Cleveland, O.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pardee Car Works, Watsontown, Pa.
Paterson Iron Co., Paterson, N. J.
Penn Iron Co. (Ltd.) Lancaster, Pa.
Pittsburgh Forge & Iron Co., 10th st. and Penn av., Pittsburgh, Pa.
St. Charles Car Co., St. Charles, Mo.
St. Louis Steam Forge & Rolling Mills (A. McDonald & Bro.), St. Louis Mo.
Taylor Iron Works, High Bridge, N. J.
Western Forge & Rolling Mills, 210 N. 3d st., St. Louis, Mo.

Forgings—S. S.

Duluth Forge Co., Duluth, Minn.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.

Forgings—Steel.

Bridgeport Forge Co., Bridgeport, Conn.
Bridgewater Iron Co., Bridgewater, Mass.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Dickson Mfg. Co., Scranton, Pa.
Eastern Forge Co., 416 Fore st., Portland, Me.
Fairmount Steel Works (Alex. Foster & Co.), 2325 Spring Garden st., Phila., Pa.
Frankford Steel Co., Frankford st., Phila., Pa.
Helcks & Dickey, 413 Commerce st., Phila., Pa.
Hussey, Howe & Co. (Ltd.), Penn av. and 17th st., Pittsb'g, Pa.
James & Co., C. E., Chattanooga, Tenn.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, Ohio.
Linden Steel Co., 163 Smithfield st., Pittsb'g, Pa.
Midvale Steel Co., Nicetown, Phila., Pa.
Miller, Wm. Son & Co., Duquesne Way and Fort st., Pittsb'g, Pa.
Milton Rolling Mill and Steam Forge, Milton, Pa.
Nashua Iron and Steel Co., Nashua, N. H. **56.**
Otis Iron and Steel Co., Cleveland, O.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Paterson Iron Co., Paterson, N. J.
Pennsylvania Steel Co., Steelton, Pa. **viii.**
Pittsburgh Steel Works (Anderson, DuPuy & Co.), 107 Wood st., Pittsb'g, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Smith Bros. & Co., Pittsb'g, Pa.
Standard Steel Works, 220 S. 4th st., Phila., Pa.
Sterling Steel Co. (Ltd.), 91 5th av., Pittsb'g, Pa.
Stuebner & Woods, 168 E. 3d st., L. I. City, N. Y.
Vulcan Forge and Iron Works (Long & Co.), Pittsb'g, Pa.
Western Forge and Rolling Mills, 210 N. 35th st., St. Louis, Mo.
Wetherell Bros., 21 Oliver st., Boston, Mass., and 115 Liberty st., N. Y.

Friction—Clutches.

Bates, H. N. & Co., 358 Atlantic av., Boston, Mass.
Blevney, John C., 59 7th av., Newark, N. J.
Brown, A. & F., 43 Park pl., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Eclipse Wind Engine Co., Beloit, Wis.
Fitchburg Steam Engine Co., Fitchb'g, Mass.
Frisbie, D. & Co., 112 Liberty st., N. Y.
Hill Clutch Works, Cleveland, O.; 18 Cortlandt st., N. Y.
Hunter, James & Son, North Adams, Mass.
Kinyon Bros., Raritan, N. J.
Link-Belt Machinery Co., 11-23 S. Jefferson st., Chicago, Ill.
Mason, Volney W. & Co., Providence, R. I.
McMyler Mfg. Co., 20 & 22 Main st., Cleveland, Ohio.
Moore & White, 1312 Buttonwood st., Phila., Pa.
Southwark Foundry & Machine Co., Wash'n av. & 5th st., Phila., Pa.
Toper Sleeve Pulley Works, Erie, Pa.
Yale & Towne Mfg. Co. (The), Stamford, Conn.

Friction—Pulleys.

American Paper Pulley Co., Indianapolis, Ind.
Mason, Volney W. & Co., Providence, R. I.
Sandy Hill Iron & Brass Works, Sandy Hill, N.Y.

Frogs, Crossings, Switches & Switch Stands.

Ajax Forge Co., Hoyne & Blue Island aves., Chicago, Ill.
Allentown Rolling Mills (The), Allentown, Pa.
Andrews, Frank H., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.
Barnum, Richardson Co., Salisbury, Conn.
Birmingham Machine & Foundry Co., Birmingham, Ala.
Bowler & Co., 12 Winter st., Cleveland, O.
Buda Foundry & Mfg. Co., Buda, Ill.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Chance, H., Fostoria, O.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Cleveland Frog & Crossing Works, 14 Winter st., Cleveland, O.
Cleveland Wheel & Foundry Works, 90 Carter st., Cleveland, O.
Craig, Wm. P., 95 Liberty st., N. Y.
Dederick, Z. P., Sherman, Tex.
Dickson Mfg. Co., Scranton, Pa.
Elliot Frog & Switch Co., East St. Louis, Ill.
Excelsior Iron Works Co., Cleveland, O.
Fairbanks & Co., 26 S. Meredian st., Indianapolis, Ind.
Fairmount Steel Works (Alex. Foster & Co.) 2325 Spring Garden st., Phila., Pa.
Fontaine Crossing & Signal Works, Toledo, O.
Fulton Foundry, Cleveland, O.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hawkins, R. F., 200 Liberty st., Springfield, Mass.
Howard, Childs & Co., Hamilton Bldg., Pittsb'g, Pa.
Hoyt R. R. Track Crossing Co., 237 La Salle st., Chicago, Ill.
Jersey City Iron Works, 587 Henderson st., Jersey City, N. J.

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Johnston Railroad Frog & Switch Co., 307 Walnut st., Phila., Pa.
Johnson Steel Street Rail Co., Johnstown, Pa. **55.**
Kansas City Switch & Frog Co., Kansas City, Mo.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Litchfield Car & Machine Co., Litchfield, Ia.
Louisville Bridge and Iron Co., Louisville, Ky.
Maher & Brayton, 20 Carter st., Cleveland, O.
Mansfield Elastic Frog Co., Congress av. and Daggett st., New Haven, Conn.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Midvale Steel Co., Phila., Pa.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Morden Frog & Crossing Works, 234 Clark st., Chicago, Ill.
Penna. Steel Co., 208 S. 4th st., Phila., Pa.; 160 B'way, N. Y.; Steelton, Pa. **viii.**
Pettibone, Mulliken & Co., 188 Wash'n st., Chicago, Ill.
Pugh & Russell, Stewart Bldg., N. Y.
Ramapo Iron Works, Hillburn, N. Y.
Railway Cab Electric Signal Co., 40 B'way, N. Y.
Robinson & Orr, 115 Water st., Pittsb'h, Pa. **72.**
Snead & Bibb, Louisville, Ky.
Tracy Mfg. Co., 46 Murray st., N. Y.
Union Switch & Signal Co., Swissvale, Pa.; Pittsburgh, Pa.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Wason Mfg. Co., Springfield, Mass.
Way, Rhodes & Blankley, 23d & Wood sts., Phila., Pa.
Weir Frog Co., Front and Water sts., Cincinnati, O. **47.**
Wm. Wharton, Jr., & Co. (Inc.), 25th st. and Wash'n av., Phila., Pa.
White, R. T., 12 Pearl st., Boston, Mass.
Whitney, A. & Son, Phila., Pa.

Frogs, Crossings, Switches & Switch Stands—Street Railway.

Andrews, Frank A., A. 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Craig, Wm. P., 95 Liberty st., N.Y.
Dederick, Z. P., Sherman, Tex.
Fulton Foundry, Cleveland, O.
Greeley, E. S. Co. (The), 5 & 7 Dey st., N. Y.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co. (The), Johnstown, Pa. **55.**
Johnston R. R. Frog & Switch Co., 307 Walnut st., Phila., Pa.
Lewis & Fowler Mfg. Co., 27-35 Walworth st., B'klyn, N. Y.
Metallic Street Ry. Supply Co., Albany, N. Y.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Pennsylvania Steel Co., Steelton & Phila., Pa. **viii**
Pugh & Russell, Stewart Bldg., N. Y.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.
Wharton, Wm. Jr. & Co. (Inc.), 25th st. & Washington av., Phila., Pa.
Whiting Mfg. Co. Cedar Rapids, Ia.

Furnaces.

American Gas Furnace Co., 60 Nassau st., N. Y.
Backus Co., Detroit, Mich.
Boughtman Stoker Co., 168 Bank st., Cleveland, Ohio.
Continental Iron Works (The), Station G., B'klyn, N. Y.
Dighton Stove Lining Co., Dighton, Mass.
Eureka Co., Oxmoor, Ala.
Field, J. A. & Co., St. Louis, Mo.
Gold, Edward E. & Co., c. Frankfort & Cliff sts., N. Y.
Parker-Russell Mining & Mfg. Co., 711 Pine st., St. Louis, Mo.
Strawn, John B., Salem, O.
Standard Gas Retort & Fire Brick Co., Ironton, Ohio.
Stubblebine Patent Co., 267 S. 4th st., Phila., Pa.
Swindell Construction Co., 605 Smithfield st., Pittsb'gh, Pa.
Van Duzen, E. W., 194 E. 2d st., Cincinnati, O.

*Furnaces—Portable.

Hartsfeld Portable Smelting Furnace & Mining Co., 90 Thornton st., Newport, Ky. **92.**

Furnace Linings—Blast.

Welch, Palmer & Maxwell, 507 Hamilton Bldg., Pittsb'gh, Pa.

*Galvanizers.

Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. **iii.**

Gas—Apparatus.

American Meter Co., 177 Elm st., Cincinnati, O.
Foster, J. M., Washington Bldg., N. Y.
Southwark Foundry & Machine Co., 5th st., Phila., Pa.
Warden, H., Germantown, Pa.

Gas Fixtures—Steamboats.

Bradley & Hubbard Mfg. Co., 21 Barclay st., N.Y.

Gas—Fuel.

Fuel-Gas & Electric Engineering Co. (The), (Ltd.), Penn Bldg., Pittsb'gh, Pa.
Lancaster, James H., 187 B'way, N. Y. **4.**

Gas Lighting Apparatus for R. R. Cars.

Railway Lighting & Heating Co., 119 S. 4th st., Phila., Pa.

Gasoline.

Baltimore Gasoline Mfg. Co., 142 N. High st., Balt., Md.
Gilbert & Baker Mfg. Co., 75 Malden la., N. Y.
Penn. Globe Gas Light Co., 47-49 N. 2d st., Phila., Pa.
Schwartz, John & Co., Titusville, Pa.
Standard Lighting Co. (The), 151-153 Seneca st., Cleveland, O.

*Gas Tips.

Steward, D. M. Mfg. Co., Chattanooga, Tenn. **80.**

Gas and Water Works Supplies.

Albany Steam Trap Co., Albany, N. Y.
Bartlett, Hayward & Co., Pratt & Scott sts., Balt., Md.
Harris, T. Wm. & Co., 46 B'way, N. Y. **79.**
Lake Erie Boiler Works, 244-254 Perry st., Buffalo, N. Y.

Gates—Car Platforms.

Goodwin, J. B., Providence, R. I.
N. Y. Patent Safety Gate Co., 71 B'way, N. Y.
Snead & Bibb, Louisville, Ky.

Gates—R. R. Crossings.

American Railway Gate Co., 216 Middle st., Portland, Me. **61.**
Jonson Foundry & Machine Co., 541 E. 118th st., N. Y.
N. Y. Patent Safety Gate Co., 115 B'way, N. Y.
Railway Cab Electric Signal Co., 40 B'way, N. Y.

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Gauge Glasses.

Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Rogers, H. A., 19 John st., N. Y. iv.

Gauges—Adjustable Shrinkage.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. 60.

Gauges—Alarm.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Edson, Jarvis B., 91 Liberty st., N. Y.
Reliance Gauge Co., Cleveland, O.
Wright, Berger & Co., Cleveland, O.

Gauges—Combination.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Crosby Steam Gauge & Valve Co., 95 Oliver st., Boston, Mass.

Gauges—Locomotive.

Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.

Gauges—Pressure.

American Meter Co., 177 Elm st., Cincinnati, O.
American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Crosby Steam Gauge & Valve Co., 95 Oliver st., Boston, Mass.
Edson, Jarvis B., 91 Liberty st., N. Y.
McDonald, D. & Co., 51 Lancaster st., Albany, N. Y.
Shaw, Thomas, 915 Ridge av., Phila., Pa.
Star Brass Mfg. Co., Boston, Mass.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.

Gauges—Recording.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Brown, Edward, 311 Walnut st., Phila., Pa.
Edson, Jarvis B., 91 Liberty st., N. Y.
Jones, S. P., Boston, Mass.

Gauges—Standard.

Am. Standard Gauge and Tool Works, Wilmington, Del.

Gauge—Steam.

American Meter Co., 521 W. 22d st., N. Y.
American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashcroft Mfg. Co., 111 Liberty st., N. Y.; Bridgeport, Conn.
Ashton Valve Co., 108 5th av. Chicago, Ill.
Betts Machine Co., Wilmington, Del.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Brown, Edward, 311 Walnut st., Phila., Pa.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Butman Furnace Co., 8-10 S. Canal st., Chicago, Ill.
Cadman, A. W. & Co., 63 Water st., Pittsb'g, Pa.
Chapin's, H., Son, Pine Meadow, Conn.
Chicago Engineer Supply Co., 18 Dearborn st., Chicago, Ill.
Cleveland Steam Gauge Co., 211 Superior st., Cleveland, O.
Cooke & Co., 22 Cortlandt st., N. Y.
Coughlin, Michael T., 49 N. Market st., Chicago, Ill.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Crosby Steam Gauge and Valve Co., 91 Oliver st., Boston, Mass.; 35 5th av., Chicago, Ill.
Dame & Townsend Co., 76 John st., N. Y.
Darling, Brown & Sharpe, Providence, R. I.
Davis, G. M. & Co., 20 S. Canal st., Chicago, Ill.
Dayton Gauge Co., Dayton, O.
Donegan & Swift, 174 Fulton st., N. Y.
Edson Recording and Alarm Gauge Co., 91 Liberty st., N. Y.
Galvin Brass and Iron Works (The), 35 5th av., Chicago, Ill.
Garrett, W. T. & Co., San Francisco, Cal.
Good, John & Co., 58 S. Clinton st., Chicago, Ill.
Gray, R., Jr., 190 Market st., Newark, N. J.
Ham, C. F. Mfg. Co., Rochester, N. Y.
Heinemann, T. W., 67-69 Lake st., Chicago, Ill.
Hohmann, August B. & Son, 90 Fulton st., N. Y.
Holt, Geo. F., 77 Haverhill st., Boston, Mass.
Hoppe, Paul F., 109 Liberty st., N. Y.
Jenkins Bros., 54 Dearborn st., Chicago, Ill.
Johnson, Wm., Newark, N. J.
Jones, S. P., 98 School st., Boston, Mass.
Knapp Mfg. Co., 22 Frankfort st., N. Y.
Knott, J. C., 40 Burling st., N. Y.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. iii.
Lindsey, Geo. M., 95 S. Sharp st., Balt., Md.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Marks, E., 147 Oliver st., Newark, N. J.
Marsh, James P. & Co., 234 Wash'n st., Chicago, Ill.
Morton, A. M. & Co., 35 Wash'n st., Boston, Mass.
Parke & Lacy, 8 California st., San Francisco, Cal.
Pedrich & Ayer, 1025 Hamilton st., Phila., Pa. 60.
Post & Co., 161 W. Pearl st., Cincinnati, O.
Powell, William, Co. (The), 50 Plum st., Cincinnati, O.
Pratt & Whitney Co. (The), Hartford, Conn.
Razel & Davis, 35 5th av., Chicago, Ill.
Reiser Balance Valve Mfg. Co., 82 E. Madison st. (Room 29), Chicago, Ill.
Reliance Gauge Co., 89 Euclid av., Cleveland, O.
Rice, H. W., 56 Bluxome st., San Francisco, Cal.
Russell & Co., Dayton, O.
Schaffer & Budenburg, 40 John st., N. Y.
Schmidt, Chas. & Son, 41 Centre st., N. Y.
Schmidt, Edward, 506 St. John st., Phila., Pa.
Schmidt, G. L., 216 Centre st., N. Y.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Stannard & Dillon, 86 S. Market st., Chicago, Ill.
Steam Gauge & Lantern Co., 25 E. Lake st., Chicago, Ill.
Sumner & Goodwin, 19 Oliver st., Boston, Mass.
Tagliabue, Guiseppe, 302 Pearl st., N. Y.
Telemeter Co., 28 Vesey st., N. Y.
U. S. Combination Gauge Co., 19 Wabash av. (Room 22), Chicago, Ill.
Utica Steam Gauge Co., Utica, N. Y.; 89 Lake st., Chicago, Ill.
Weed & Kingwell, 125 1st st., San Francisco, Cal.
White Bros., 58 S. Clinton st., Chicago, Ill.
Williams, I. A. & Co., 89 E. Lake st., Chicago, Ill.
Willing, C. G., 88 John st., N. Y.
Wingate, Webb & Melvin, 212 Dock st, Phila., Pa.
Winsor, Ira & Co., 122 Dorrance st., Providence, R. I.
Yale & Towne Mfg. Co. (The), Stamford, Conn.
Zaubitz, August, 48 Centre st., N. Y.

Gauges—Surface.

Billings & Edmonds Mfg. Co. (The), Rocky Hill, Conn.
Billings & Spencer Co. (The), Hartford, Conn.
Starrett, L. S., Athol, Mass.

Gauges—Test.

Crosby Steam Gauge & Valve Co., 95 Oliver, st., Boston, Mass.

Gauges—Track.

Warren, Andrew, 707 N. 2d st., St. Louis, Mo.

Gauges—Vacuum.

Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Crosby Steam Guage & Valve Co., 97 Oliver st., Boston, Mass.

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Davis, G. M. & Co., 20 S. Canal st., Chicago, Ill.
Star Brass Mfg. Co., 53 Oliver st., Boston, Mass.
Tagliabue, Guiseppe, 302 Pearl st., N. Y.

Gauges—Hydraulic.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Bellfield, H. & Co., 435 N. Broad st., Phila., Pa.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Crosby Steam Gauge & Valve Co., 95-97 Oliver st., Boston, Mass.
Darling, Brown & Sharpe, Providence, R. I.
Fulmer, A. J. & Co., Camden, N. J.
Hoppe, Paul F., 109 Liberty st., N. Y.
Kendall Mfg. Co., Buffalo, N. Y.
Lang, J. & Co., 44 Michigan st., Chicago, Ill.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
McElroy, P. J., East Cambridge, Mass.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Shaw, Thomas, 915 Ridge av., Phila., Pa.
Springfield Brass Co., 80 & 84 Limestone st., Springfield, O.
Reliance Gauge Co., Cleveland, O.
Shaw, Thomas, 915 Ridge av., Phila., Pa.
Star Mfg. Co., 53 Oliver st., Boston, Mass.
Watson & Stillman, 204 E. 43d st., N. Y.
Wilson Mfg. Co., Detroit, Mich.
Yale & Towne, Mfg. Co., Stamford, Conn.

Gear Cutting.

Bair & Gazzam (Ltd.), 86 3d av., Pittsb'g, Pa.
Bangor Foundry and Machine Co., 8-10 Central st., Bangor, Me.
Blaisdell, P. & Co., Worcester, Mass.
Brainard Milling Machines Co., Hyde Park, Mass.
Crary, C. W. & Son, 35-41 E. Indiana st., Chicago, Ill.
Gage Machine Works, Waterford, N. Y.
Garvin, E. E. & Co., 139-143 Center st., N. Y.
Goodnow & Wightman, 176 Wash'n st., Boston, Mass.
Gould., E., & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Grant, Geo. B., Boston, Mass.
Hewes & Phillips Iron Works, Newark, N. J.
Herrick, W., Northampton, Mass.
Scaiffe Foundry and Machine Co., 28th, c. Smallman st., Pittsb'g, Pa.
Whiton, D. E., New London, Conn.

Gearing.

Briggs, R. F. & Co., Amesbury, Mass.
Brown & Sharpe Mfg. Co., Providence, R. I.
Buffalo Carriage Co., Buffalo, N. Y.
Buffalo Steel Foundry (The), Buffalo, N. Y.
Canastota Carriage Gear Mfg. Co., Canastota, N. Y.
Champion Gear Co., Lockport, N. Y.
Chase Turbine Mfg. Co., Orange, Mass.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Dickson Mfg. Co., Scranton, Pa.
Eagle Iron Works, 252 Woodbridge st., W. Detroit, Mich.
East Dubuque Mfg. Co., E. Dubuque, Ill.
Ehrsam, J. B. Machine Co., Enterprise, Kan.
Eyre, Henry C. & Co., Chester, Pa.
Fischer Foundry and Machine Co., Pittsb'g, Pa.
Fishkill Landing Machine Co., Fishkill, N.Y. **iv.**
Forbes, Geo. & Co., E. Brookfield, Mass.
Franklin Machine Co., Providence, R. I.
Houghton & Kniesser, Toledo, O.
Holmes Gear Works (The), Gardiner, Me.
Holmes, Philip C. & Co., Gardiner, Me.
Keogh, C. B. & Co., 8 Howard st., N. Y.
Kilburn, Lincoln & Co., Fall River, Mass.
King Spring & Gear Co., Buffalo, N. Y.
Link Belt Machinery Co., 11 and 23 S. Jefferson st., Chicago, Ill.
Lock Spring Gear Co., Ann Arbor, Mich.
Lowell Machine Shop, Lowell, Mass.
McMurray, C. F., Hartford, Conn.
Marcy & Knoblaugh, 8th st. & C. H. & D. R. R., Cincinnati, O.
Mayer, H. A., Syracuse, N. Y.
National Vehicle Co., Racine, Wis.
Newton & Colby, Kalamazoo, Mich.
Novelty Mfg. Co., Depire, Wis.
Phœnix Iron Foundry, c. Elm and Eddy sts., Providence, R. I.
Poole & Hunt, 7 German st., Balt., Md.
Providence Machine Co., 564 Eddy st., Providence, R. I.
St. Julien Gear Co., Janesville, Wis.
Sandusky Machine and Ag'l. Works, Sandusky, Ohio.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Spring, Thomas, & Gear Co., Janesville, Wis.
Sprowles & Houseman, 243 Arch st., Phila., Pa.
Stillwell & Bierce, Dayton, O.
Van Volkenburg & Palmer, Binghamton, N. Y.
Waterbury Farrel F'dy & Machine Co., Waterbury, Conn.
Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.
Wilcox & Howe, Birmingham, Conn.
Williams & Orton Mfg. Co., Sterling, Ill.
Wood, Thos. & Co., 29d & Wood sts., Phila., Pa.

Gearing—Car and Loco.

Baltimore Car Wheel Co. (The), Baltimore, Md.
Chaplin Mfg. Co., 69 Wall st., N. Y.
Eureka Cast Steel Co., 307 Walnut st., Phila, Pa.
Stephenson, John & Co. (Ltd.), 47 E. 27th st., N. Y.

Gearing—Rolling Mill.

Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Herrick, W., Northampton, Mass.
Lane & Bodley Co. (The), Cincinnati, O.
Lawrence & Chapin, Kalamazoo, Mich.
Lombard, Geo. R. & Co., Augusta, Ga.
Nordyke & Marmon Co., Indianapolis, Ind.
Noye, John S. Mfg. Co. (The), Buffalo, N. Y.
Sellers, Wm. & Co., Phila., Pa.
Smith, Winchester & Co., S. Windham, Conn.

Gear—Reversing for Engines.

American Ship Windlass Co., Providence, R. I. **xii.**

Gears—Steering.

Barnes Tool Co., 958 Grand av., New Haven, Conn.
Hicks, Chas. N., 175 Lewis st., N. Y.

Generators—Electric.

Scott, Dr. Geo. A., 842 B'way, N. Y.

Generators—Steam.

Gilstrap, A. L., Springfield, Mo.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Rice & Whitacre Mfg. Co., 42-44 W. Monroe st., Chicago, Ill.

German Silver.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.; 19 Murray st., N. Y.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Osborne & Cheesman Co., Ansonia, Conn.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Scovill Mfg. Co., Waterbury, Conn.
Waterbury Brass Co., 296 B'way, N. Y.

* Gilding Powders.

Canton Paint & Oil Co., Melrose, Mass.

Gimlets.

Bates, Wilson & Co., 80 Chambers st., N. Y.
Chester Mfg. Co., Chester, Conn.

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Cincinnati Tool Co. (The), Cincinnati, O.
Conn. Valley Mfg. Co. (The), Centre Brook, Conn.
Deuse, Amos H. & J. S., Chester, Conn.
Garrett & Beach, Seymour, Conn.
Mayhew, H. H. & Co., Shelburne Falls, Mass.
Norton & Co., Chester, Conn.

Glass Benders.

Vanhorne, Griffin & Co., 131 Franklin st., N. Y.

Glass Bevelers and Cutters.

Ancelin, Albert, 94 S. 5th av., N. Y.
Archer, Thos., 204 E. 23d st., N. Y.
Cristel & Co., r. 41 Centre st., N. Y.
Devoe, Joshua B., 124 Baxter st., N. Y.
Donnelly, J. R. & Co., White, c. Centre st., N. Y.
Dougherty, James, 94 S. 5th av., N. Y.
Flynn, Thos. E., r. 225 E. 36th st., N. Y.
Gallagher, Patrick J., 323 Pearl st., N. Y.
Hallahan & Cavanagh, 83 S. 5th av., N. Y.
Halton, L. D. & Co., 35 W. 4th st., N. Y.
Heroy & Marrenner, 126 S. 5th av., N. Y.; 149 Michigan av., Chicago, Ill.
Heston Bros. & Denney, 213 Centre st., N. Y.
Jakeway, John W. & Co., 12 Desbrosses st., N. Y.
Jones, Thos., Franklin, c. Centre st., N. Y.
La Fayette Ornamental Glass Works, 90-96 Wythe av., Brooklyn, E. D.
Meyer, Peter P., 117 Prince st., N. Y.
Obert, Henry, White, n. Elm st., N. Y.
Potts Bros., 48 Duane st., N. Y.
Roulet, Adolph, 213 Centre st., N. Y.
Schweitzer Bros., 87 Crosby st., N. Y.
Semmer, Philip, Glass Co. (Ltd.), 12 Desbrosses st., N. Y.
Simonin, L. & Co., 139 Elm st., N. Y.
Taylor, Arthur S., 173 Grand st., N. Y.
Van Praag, A. & Co., 130 Worth st., N. Y.
Vogeley, Alexander, Franklin, n. Elm st., N. Y.
Vonbuhren, Geo., 13 Baxter st., N. Y.
Zahn, Jacob & Son, 478 Pearl st., N. Y.

Glass—Car.

Bache, Semon & Co., 79 Dearborn st. (Room 21), Chicago, Ill.; 143 Greenwich st., N. Y.
Bradley & Co., 18-20 River st., Chicago, Ill.
Breed, Richard E. & Co., 69 Dearborn st. (Room 9), Chicago, Ill.
Chicago Glass Mfg. Co., 4023 Wentworth av., Chicago, Ill.
Crawford, W. R., 243 S. State st. (Room 26), Chicago, Ill.
Dithridge & Co., 2 College pl., N. Y.
Eisendrath, B. W. & Co., 117 E. Lake st., Chicago, Ill.
Ernst, B. C., 113 E. Adams st. (Room 36), Chicago, Ill.
Etna Glass Mfg. Co., 2 College pl., N. Y.
Fox, Albert M., 80 Dearborn st. (Room 2), Chicago, Ill.
Fox & Fox, 115 Dearborn st. (Room 25), Chicago, Ill.
Grom & Schoenewald, 909 Milwaukee av., Chicago, Ill.
Heroy & Marrenner, 149 Michigan av., Chicago, Ill.; 126 S. 5th av., N. Y.
Hooker, H. M., 57 & 59 Randolph st., Chicago, Ill.
Jones, Fred. D., 161 La Salle st. (Room 32), Chicago, Ill.
Kimball, Geo. F., 315 to 321 Wabash av., Chicago, Ill.
Le Bel, E., 2 College pl., N. Y.
Mississippi Glass Co., Main & Angelica sts., St. Louis, Mo.
Morris, Theo. W. & Co., 287 Wabash av., Chicago, Ill.
Newkirk, H. A., 243 S. State st. (Room 26), Chicago, Ill.
Paddon, Albert A., 156 E. Washington st., (Room 32), Chicago, Ill.
Philip Semmer Glass Co. (Ltd.), 12 Desbrosses st., N. Y.
Rice, James H. Co., 13-15 & 17 Quincy st., Chicago, Ill.
Sprague, Smith & Co., 205 E. Randolph st., Chicago, Ill.
Tyler & Hippach, 149 & 151 Michigan av., Chicago, Ill.
Van Horne, Griffin & Co., 185 Dearborn st. (Room 19), Chicago, Ill.
Wells Glass Co., 202 E. Randolph st., Chicago, Ill.
Wightman, Thos. & Co., 209 Wood st., Pittsb'gh, Pa.

Glass—Cathedral.

Kelley & Co., 21 Pearl st., Boston, Mass.
Mississippi Glass Co., Main and Angelica sts., St. Louis, Mo.
Rowan & Kelly, 79, 81, 83 Portland st., Boston, Mass.

Glass—Embossed.

French, Samuel H. & Co., York av. and Callowhill st., Phila., Pa.

Glass—Flint.

Boston Antique Glass Co., 58 Devonshire st. Boston, Mass.
Boston and Sandwich Glass Co., 44 Franklin st., Boston, Mass.
Challinor, Taylor & Co., Tarentum, Pa.
Co-operative Flint Glass Co., Beaver Falls, Pa.
Dannenhoffer, Nicholas, 58 Rutledge st., Brooklyn, N. Y.
Excelsior Flint Glass Co., Pittsburgh, Pa.
Gill Bros. & Co., Steubenville, O.
Gillender & Sons, Oxford and Howard sts., Phila., Pa.
McKee & Bros., Pittsburgh, Pa.
Macbeth, Geo. A. & Co., 10th and Carson sts., Bellaire, O.
Meriden Flint Glass Co., 147 Franklin st., Boston, Mass.
New England Glass Works, 155 Franklin st., Boston, Mass.

Glass—Mirrors.

Annesley & Co., 57 N. Pearl st., Albany, N. Y.
Arnstein, A. & Co., 53 Maiden Lane, N. Y.
Austrian, L. & Co., 110 S. Jefferson st., Chicago, Ill.
Bache, Semon & Co., 443-453 Greenwich st., N. Y.
Baker, A., 742 Mission st., San Francisco, Cal.
Beers Bros, 814 B'way, N. Y.
Benson, D. De Lancey, 390 Main st., Buffalo, N. Y.
Binswanger, S. & Co., 210 and 212 Canal st., N. Y.
Blanck & Co., 16 Horatio st., N. Y.
Bon & Sherman, 43 W. Onondago st., Syracuse, N. Y.
Bostwick, G. E., Washington, Ind.
Boyd, S. & Co., 426 Wood st., Pittsburgh, Pa.
Bragg, Conant & Co., 14 and 16 Washington st., Boston, Mass.
Brenninger, H., 11 New st., Newark, N. J.
Bruns, Wm., 325 B'way, N. Y.
Buehler, F., Springfield, O.
Burton, W. H. & Co., 56 N. Pearl st., Albany, N. Y.
Cameron Mfg. Co., 252 Market st., Newark, N. J.
Campbell, C. G. & Son, 758 Broad st., Newark, N. J.
Caro, J. & Son, 438 Pearl st., N. Y.
Carpenter, H., Auburn, N. Y.
Cary & Kenny, 522 Broad st., Newark, N. J.
Cohen, H., 19 Dupont st., San Francisco, Cal.
Cohn, S., 372 Pearl st., N. Y.
Collins, W., 130 5th st., Troy, N. Y.
Columbus Picture Frame Co., Columbus, O.
Conant, A. & Co., 73 Union st., Boston, Mass.
Cross, J. B. Albany Bldg., Cincinnati, O.
Denison, Wm. B., 489 B'way, N. Y.
Deuther Mfg. Co., 104 Seneca st., Buffalo, N. Y.
De Vausney & Mossop, 625 Broad st., Newark, N. J.
Dimant, J., 417 E. 14th st., N. Y.
Donnelly, J. R. & Co, White, n. Centre st., N. Y.
Doscher, Wm. C., 33-35 1st st., N. Y.

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Doyle, M., 176 River st., Troy, N. Y.
Dreyfuss, B., 300-302 Monroe st., N. Y.
Dudley, E., Crawfordsville, Ind.
Dunsing & Hoepfner, 353 4th av., N. Y.
Earle, Jas. S. & Sons, 816 Chestnut st., Phila., Pa.
Ellis, L. B., New Bedford, Mass.
Everett, E. L., 1 Keenan Bldg., Troy, N. Y.
Fahle, A., Indianapolis, Ind.
Fendrich, C. S., Evansville, Ind.
Ferris, T. R., 52 Hudson av., Albany, N. Y.
Fersenheim, R., 154 E. 23d st., N. Y.
Fogarty & York, 193 River st., Troy, N. Y.
Friedenberg, S., 2267 3d av., N. Y.
Gerth, J., 233 Wash'n st., Newark, N. J.
Ghisla & Briassoli, 28 Kneeland st., Boston, Mass.
Gillespie, J. J. & Co., 422 Wood st., Pittsb'gh, Pa.
Goldman, Morris, 96 Division st., N. Y.
Green & Waterman, 263 River st., Troy, N. Y.
Guillaume, Q., 222 Wooster st., N. Y.
Gump, S. & G., 581 Market st., San Francisco, Cal.
Hartney, J. D., Springfield, O.
Hausmann Bros., Market, c. Sansome st., San Francisco, Cal.
Hendricks, F. & Co., 4 E. Fayette st., Syracuse, N. Y.
Heroy & Marrenner, 126 S. 5th av., N. Y.; 149 Michigan av., Chicago, Ill.
Hicks, C., Jeffersonville, Ind.
Hicks, J., 44 3d st., Troy, N. Y.
Hills, Turner & Co., 195 State st., Boston, Mass.
Hirshberg Bros. & Hollander, 24 Hopkins pl., Balt., Md.
Hoddick & Co., 285 Main st., Buffalo, N. Y.
Hodge, J., Marion, Ind.
Hooper, W. H., 99 S Pearl st., Albany, N. Y.
Hospe L. & Co., 180 Race st., Cincinnati, O.
Hotchkin, A. L., 329 to 333 River st., Troy, N. Y.
Hudson, S., Indianapolis, Ind.
Hughson & Oudin, 130 Greene st., N. Y.
Kahn, J., 75 Spring st., N. Y.
Kasal, A., 20 Johnson st., Chicago, Ill.
Keith, R. & Co., 189 River st., Troy, N. Y.
Kelly, J. R. & Co., 222 Market st., San Francisco, Cal.
Kelsey, C., 270 River st., Troy, N. Y.
Kepler, E., New Albany, Ind.
Kohl, C., 85 S. Orange av., Newark, N. J.
Lambert Bros., 53-55 Brattle st., Boston, Mass.
Laudenbach, P., 362 Walnut st., Cincinnati, O.
Lawrence, Wilde & Co., 42 Cornhill, Boston, Mass.
Lewis, A., 1215 Stockton st., San Francisco, Cal.
Lewis M., 673 Mission st., San Francisco, Cal.
Lieber, H. & Co., Indianapolis, Ind.
Lippi Bros, 749 Market st., San Francisco, Cal.
Louisiana Mirror Mfg. Co., New Orleans, La.
Louisville Beveling & Silvering Co., 555 E. Jefferson st., St. Louis, Mo
Lovering, W. B., 53 Portland, st., Boston, Mass.
Luck, C C., 95 S. Pearl st., Albany, N. Y.
Lyon & Carpenter, 55 S. Pearl st., Albany, N. Y.
McCann, F. H., 126 Wash'n av., Albany, N. Y.
McEachran & Rowe, 132 Main st., San Francisco, Cal.
McKee, Minchew & Taylor, 55 Portland st., Boston, Mass.
Mann, Wm., 46 S. Charles st., Balt., Md.
Marchebout, F., 1115 Dupont st., San Francisco, Cal.
Margileth, B., Aurora, Ind.
Mayer, J. M., Fort Wayne, Ind.
Meyer, C. F., Indianapolis, Ind.
Moore, J. & Co., 60 James st., Syracuse, N. Y.
Murname Mirror & Beveling Co., 410 N. 10th st., St. Louis, Mo.
Nathan, B. & Co., 130 Sutter st., San Francisco, Cal.
Newman, Geo. C., 806 Market st., Phila., Pa.
Newman, J. A. & Son, Ipswich, Mass.
Newmann, L., 80 W. B'way, N. Y.
Noelcke, E., Central av., c. Longworth st., Cincinnati, O.
Nurre, A. J. & Co., 164 Main st., Cincinnati, O.
O'Brien, W. K. & Bro., 83 3d av., N. Y.
Pape Bros. & Kugeman, 155 W. 4th st., Cincinnati, O.
Parsons, C. A. & Co., 235 Canal st., N. Y.
Philip Semmer Glass Co. (Ltd.), 12 Desbrosses st., N. Y.
Poellmann, Daniel, 94 Warren st., N.Y.
Probst, F. L., Terra Haute, Ind.
Quirk, D. J., 131 4th st., San Francisco, Cal.
Ralston, D. A., Indianapolis, Ind.
Raymond, L. W., 189-191 River st., Troy, N. Y.
Rieser, J. M. & Co., 84 S 5th av., N. Y.
Reisz, G., 280 Lodi st., Syracuse, N. Y.
Reuhl, P. & Co., 282 Main st., Cincinnati, O.
Richardson & Co., 243 Canal st., N. Y.
Richman, R., 13 Catherine st., N. Y.
Ror, R. B., Lafayette, Ind.
Rosenbaum, F. H. & Co., 567 Market st., San Francisco, Cal.
Salisbury, F. W. & Co., 13 Congress st, Troy, N. Y.
Sanborn, Vail & Co., 857 Market st., San Francisco, Cal.
Schlenz, F. H., Indianapolis, Ind.
Schlund & Doll, 462 Main st., Buffalo, N. Y.
Schreirch, F., Indianapolis, Ind.
Schulze, F. E., 59 Elder st., Cincinnati, O.
Schuster & Co., White, c. Elm st., N. Y.
Semmer, Philip & Co., 8 Desbrosses st., N. Y.
Shaddock, T., 119 6th st., San Francisco, Cal.
Shelter, H., 99 State st., Rochester, N. Y.
Sherburne, R., 20-22, Canal st., Boston, Mass.
Shoemaker, B. H., 205 N. 4th st., Phila., Pa.
Simonton, R. P., 99 6th av., N. Y.
Souweine & Co., 210-212 Canal st., N. Y.
Strahle, J. & Co., 515 Market st., San Francisco, Cal.
Stewart, L. D., 288 3d av., N. Y.
Stillman, A. S. & Co., 95 State st., Rochester, N. Y.
Straus, A. & H., 153 W. 4th st., Cincinnati, O.
Straus, Bloom & Co., Battery, c. Pine st., San Francisco, Cal.
Strobel, L. A. & Co., Elm, c. Canal st., Cincinnati, O.
Sullivan & Ravekes, 220 California st., San Francisco, Cal.
Sutor, W. A. F., 17 Exchange st., Buffalo, N. Y.
Syracuse Moulding Co., E. Water, c. Chestnut st., Syracuse, N. Y.
Thompson, J., 1 Green st., Albany, N. Y.
Thonssen, G. H., Mfg. Co., 25 S. 4th st., St. Louis, Mo.
Thorne, A. & Co., 309 River st., Troy, N. Y.
Utter, L., 47 Royal st., New Orleans, La.
Vanhorne, Griffin & Co., 131 Franklin st., N. Y.
Van Praag, A. & Co., 130 Worth st., N. Y.
Vint, J., 34 N. Pearl st., Albany, N. Y.
Vomfell, O., 212 Centre st., N. Y.
Von Buhren, G. & Co., 11 Baxter st., N. Y.
Ward, Joseph & Co., 8 Charlestown st., Boston, Mass.
Washburn Glass Co., 401 N. 2d st., St. Louis, Mo.
Weimar Mfg. Co., 317 E. 22d st., N. Y.
White, F. W., 269 Canal st., N. Y.
Whittemore Bros., 579 Broadway, N. Y.
Whittier, Fuller & Co., 21 Front st., San Francisco, Cal.
Widman, C. D. & Co., 144 Randolph st., Detroit, Mich.
Wiederer, P. & Bro., 521 B'way, N. Y.
Willard, John B., 257 Canal st., N. Y.
Williams, H. G., Fayette, c. Montgomery av., Syracuse, N. Y.
Wilmurt, T. A., 54 E. 13th st., N. Y.
Wilson, J. C., 635 Broad st., Newark, N. Y.
Yale, J. W., 62 Salina st., Syracuse, N. Y.
Young, P., 418 Wood st., Pittsb'gh, Pa.
Zahn, Jacob & Son, 478 Pearl st., N. Y.

Glass—Mosaic.

Hartwell, H. Edgar Co., 19 W. 22d st., N. Y.; 1416 F st., N.W. Washington, D. C.
Hiedt-Lewis & Bros., Boerum and White sts., B'klyn, N. Y.
Smith, David N., 1376 B'way, N. Y.
Tiffany Glass Co. (The), 333 4th av., N. Y.

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Glass—Ornamental for Ry. Cars.

Block, W. F., 259 Randolph st., Chicago, Ill.
Freeth, James W., 110 John st., N. Y.
Friederichs & Staffin, 107 Gratiot av., Detroit, Mich.
Groves. R. S. & Steil, 617 S. Broad st., Phila, Pa.
Hayes & Son, 71 8th av., N. Y.
Jones, Thos., Franklin, c. Centre st., N. Y.
La Fayette Ornamental Glass Works, 90-96 Wythe av., B'klyn, E. D., N. Y.
Lewis, H. W. & Co., 174 St. Clair st., Cleveland, Ohio.
Mississippi Glass Co., St. Louis, Mo.
Payne, George, 38-40 William st., Orange, N. J.
Postal, C. H. & Co., 1314 Ridge av., Phila., Pa.
Schneider, Frederick, 80-82 Market st., Chicago, Ill.
Whitehouse & Wells, 205 N. 2d st., B'klyn, E. D., N. Y.

Glass—Plate.

Aleo, Miguel, 22 Howard st., N. Y.
Arnstein, Albert & Co., 53 Maiden la., N. Y.
Avery, Penabert & Co., 63 S. 5th av., N. Y.
Bache, Semon & Co., 443-453 Greenwich st., N. Y.
Bendit, Drey & Co., 159 S. 5th av., N. Y.
Binswanger & Co., 210-212 Canal st., N. Y.
Boles, Levi & Son, Haymarket sq., c. Sudbury st., Boston, Mass.
Boyd, Edw. A. & Sons, 167 S. 5th av., N. Y.
Brown & Haywood, 21-25 N. 3d st., Minneapolis, Minn.
Cahn, Henry H., 24 Howard st., N. Y.
Caro, J. & Son, 196 Canal st., N. Y.
Cohn, Sigmund, 372 Pearl st., N. Y.
Crystal Plate Glass Co., 418 Wood st., Pittsburgh, Pa.; 102 Chambers st., N. Y.
Denison, Wm. B., 489 Broadway, N. Y.
De Paun's American Plate Glass Works, c. 10th st. and R. R. av., New Albany, Ind.
Drew, F. A., Glass Co., 623 St. Charles st., St. Louis, Mo.
Drey & Kahn, 512-514 St. Charles st., St. Louis, Mo.
Dunham, T. C., 68 Murray st., N. Y.
Fitzpatrick, J. & Co., 28-30 N. Moore st., N. Y.
Ford, J. B. & Co., Pittsburgh, Pa.
Fox & Fox., 115 Dearborn st., Chicago, Ill.
Gallagher & Gilroy, 12 Peck sl., N. Y.
Garrison, J. H., 209 Hudson st., N. Y.
Gillespie, J. J. & Co., 442 Wood st., Pittsburgh, Pa.
Glenny Bros. Glass Co., 217 S. 6th st., c. Clark av., St. Louis, Mo.
Goldman, Bertha, 98 Division st., N. Y.
Hausmann Bros., Market, c. Sansome st., San Francisco, Cal.
Heroy & Marrenner, 126 S. 5th av., N. Y.; 149 Michigan av., Chicago, Ill.
Hills, Turner & Co., 195 State st., Boston, Mass.
Holbrook Bros., 85-89 Beekman st., N. Y.
Kahn, J., 75 Spring st., N. Y.
Kelly, J. R. & Co., 221 Market st., San Francisco, Cal.
Kimball, George F., 315-321 Wabash av., Chicago, Ill.
King, Gilbert S., 102 Chambers st., N. Y.
Lambert Bros., 53-55 Brattle st., Boston, Mass.
Leffingwell Glass Co., 67 St. Clair st., Cleveland, Ohio.
Lewis, M., 673 Mission st., San Francisco, Cal.
London and Manchester Plate Glass Co. (Ltd.), 73 Wooster st., N. Y.
Lovering, W. B., 80 Portland st., Boston, Mass.
Morris, Theodore W. & Co., 442 Canal st., N. Y.
Noel, Vanwycke & Co., 83 S. 5th av., N. Y.
Noel & Sons, 449-453 W. 14th st., N. Y.
Noyes Bros. & Cutler, St. Paul, Minn.
Page, Harding & Co., 118 Milk st., Boston, Mass.
Philip Semmer Glass Co. (Ltd.), 12-14 Desbrosses st., N. Y.
Pittsburgh Plate Glass Co., 61 4th av., Pittsburgh, Pa.
Reid, Wm., 73 Larned st., W. Detroit, Mich.
Reiser, Julius M., 86 S. 5th av., N. Y.
Reiser, J. M. & Co., 82 to 86 S. 5th av., N. Y.
Rosenbaum, F. H. & Co., 567 Market st., San Francisco, Cal.
Rowan & Kelly, 79-81-83 Portland st., Boston, Mass.
Royers, Antoine & Co., 1213 Filbert st., Phila., Pa.
Semmer, Philip, Glass Co. (Ltd.), 12 Desbrosses st., N. Y.
Sherburne, R., 20 22 Canal st., Boston, Mass.
Souweine & Co., 210-212 Canal st., N. Y.
Spitz & Henschel, 173 7th av., N. Y.
Steele, Birdsell & Ford, Minneapolis, Minn.
Sullivan & Rarekes, 220 California st., San Francisco, Cal.
Sutphen & Co., 11 Desbrosses st., N. Y.
Thorpe, John, 243 B'way, N. Y.
Vanhorne, Griffen & Co., 131 Franklin st., N. Y.
Van Praag, A. & Co., 130 Worth st., N. Y.
Waller, Josiah A., 73 Wooster st., N. Y.
Whittemore Bros., 579 B'way, N. Y.
Welderer, P. & Bros., 521 B'way, N. Y.
Whittier, Fuller & Co., Front, c. Pine st., San Francisco, Cal.

Glass—Window, for Railroad Cars and Steamboats.

Fitzpatrick, J. & Co., 12 College pl., N. Y.
Lee, Ed. F., Brush & Lafayette sts., Detroit, Mich.
Phillips & Co., 19th & Mary sts., S. S., Pittsb'gh, Pa.
Philip Semmer Glass Co. (Ltd.), 12 Desbrosses st., N. Y.
Semon, Bach & Co., 451 Greenwich st., N. Y.
Wightman, Thos., & Co., 209 Wood st., Pittsb'gh, Pa.

Glass—Stained.

Aicken, Thos., G., 2129 Market st., Phila., Pa.
Atterbury & Co., 77 Carson st, Pittsb'gh, Pa.
Belcher Mosaic Glass Co., 125 5th av., N. Y.; Newark, N. J.
Billings, P. A., 176 Woodward av., Detroit, Mich.
Booth & Riester, 29 Pearl st., Buffalo, N. Y.
Boston Antique Glass Co., 53 Devonshire st., Boston, Mass.
Boston Stained & Cut Glass Works, 149 Congress st., Boston, Mass.
Bowen, Geo. A., 197 W. 4th st., Cincinnati, O.
Chicago Stained Glass Works, 216 E. Lake st., Chicago, Ill.
Continental Stained Glass Works, 7 Boylston st., Boston, Mass.
Copeland, Hugh B., Denver, Col.
Davis & Carter Co. (The), Cleveland, O.
Detroit Stained Glass Works, 107 Gratoit av., Detroit, Mich.
Flanagan & Biedenway, 224 Kinzie st., Chicago, Ill.
Forrester, J. K., 541 Liberty av., Pittsb'g, Pa.
Friedericks & Staffin, 107 Gratoit av., Detroit, Mich.
Godwin, Alfred, 1201 Market st., Phila., Pa.
Hayward, Samuel, 27 Motte st., Boston, Mass.
Heidt, Louis, 50-52 Bartlett st., B'klyn, E. D., N. Y.
Kiefernagel, Jos., 43 Park av., Balt., Md.
Maginn & Davis, 47-49 University pl., N. Y.
Marshall, S. S. & Bros., 15 7th av., Pittsb'g, Pa.
Mississippi Glass Co., St. Louis, Mo.
Nelson, Wm., 109 Market st., Pittsb'g, Pa.
Payne, Geo., 38-40 William st., Orange, N. J.
Phœnix Glass Co., Pittsb'g, Pa.
Postel, C. H. & Co., 1314 Ridge av., Phila., Pa.
Redding, Baird & Co., 152 Franklin st., Boston, Mass.
Reith, Wm., 134 N. 7th st., Phila., Pa.
Schiedel, Fred, 7 Market st., Pittsb'g, Pa.
Standard Stained Glass Works, 144 N. 9th st., Phila., Pa.
Sternberg, F. X. & Co., N. E. cor. 3d and Main sts., Cincinnati, O.
Tiffany Glass Co., 333 4th av., N. Y.
Treadwell, E. P., 5 Somerset st., Boston, Mass.
Wells Glass Co. (The), 48-50 Franklin st., Chicago, Ill.
Western Sand Blast Co. (The), Clinton and Jackson sts., Chicago, Ill.

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Glass Stainers and Enamelers.

Adams, Samuel M., 658 B'way, N. Y.
Amfahr, Christian, 212 W. 33d st., N. Y.
Baker, James & Sons, 20 W. 4th st., N. Y.
Baldwin, Isaac E., 47 University pl., N. Y.
Belcher Mosaic Glass Co., 123 5th av., N. Y.
Biggs, Frank D., 416 4th av., N. Y.
Bolle, Chas. C., 206 W. 26th st., N. Y.
Colgate, Edw., 318 W. 13th st., N. Y.
Crowinshield, Frederic, 42 W. 18th st., N. Y.
Decorative Stained Glass Co., 11 Wash'n pl., N. Y.
Dougherty, James, 94 S. 5th av., N. Y.
Geissler, Rudolph, 320 E. 48th st., N. Y.
Gibson's, William, Sons, 142 E. 33d st., N. Y.
Guillaume, Quirin, 36 W. 3d st., N. Y.
Hartwell, H. Edgar, Co., 19 W. 22d st., N. Y.
Kampe & Grout, 34 E. Houston st., N. Y.
Kirtland, Frank A., 143 E. 23d N. Y.
Koechig, Julius C., 1496 B'way, N. Y.
Lamb, J. & R., 59 Carmine st., N. Y.
Lippens, Edw., 213 E. 23d st., N. Y.
Lumpert, Edw., 102 E. 12th st., N. Y.
McMahon, P. F., 157 Wooster st., N. Y.
Maginn & Davis, 47 University pl., N. Y.
Mayer & Co., 194 W. 23d st., N. Y.
Molio, Frank, 109 Greenwich av., N. Y.
Morgan, T. & J., 53 Bleecker st., N. Y.
Russell, J. W. & Co., 294 Pearl st., N. Y.
Savary, Eugene A., 210 W. 49th st., N. Y.
Smith, David N., 1378 B'way, N. Y.
Smith, James M., 89 Charles st., N. Y.
Standinger, Andrew, Boulevard, n. W. 84th st., N. Y.
Turno, Chas. H., n. 148 W. 4th st., N. Y.
Wolf, F. & J. C., 80 University pl., N. Y.

Glass—Stained (Imitation).

Diehl, J. P. & Son, 620 Penn av., Pittsburgh, Pa.
McCaw, Stevenson & Orr, 32 B'way, N. Y.
Young, W. C., 731 Arch st., Phila., Pa.

Glass—Window.

Abel, Smith & Co., 69 Carson st., Pittsburgh, Pa.
Abrahams, Barnett, 2027 3d av., N. Y.
Albrecht, H., Peoria, Ill.
Androvette, Geo. E., Jackson, c. Clinton st., Chicago, Ill.
Arnold & McGowan, 6 Exchange pl., Providence, R. I.
Aronson, Harris, 133 8th av., N. Y.
Avery, Penabert & Co., 63 S. 5th st., N. Y.
Ayres, P. & Son, 494 Broome st., N. Y.
Bache, Semon & Co., 443 to 453 Greenwich st., N. Y.
Baker Bros. & Co., 36-38 S. Charles st., Balt., Md.
Barge & Gross, 141 Bank st., Cleveland, O.
Barnesville Glass Co., Barnesville, O.
Bates, J. C., 80 Portland st., Boston, Mass.
Beaver & Butt, Dayton, O.
Becker, P. & Co., 468 Main st , Buffalo, N. Y.
Bellaire Window Glass Works, Bellaire, O.
Benners, Henry B., 27 S. Front st., Phila., Pa.
Bennett, A., 2797 3d av., N. Y.
Bennett, G. S. & Co., 114 N. 9th st., Phila., Pa.
Bernstein, Ada, 2005 3d av., N. Y.
Blanding, William B., 54-58 Weybossett st., Providence, R. I.
Blitz, I. & Son, 80 Jefferson av., Detroit, Mich.
Blumberg, Harris, 429 Wash'n st., N. Y.
Blumberg, M., 67 Greenwich st., N. Y.
Bradley & Currier Co. (Ltd.), (The), 54 Dey st., N. Y.
Brown & Haywood, 21-25 N. 3d st., Minneapolis, Minn.
Brown & McCord, Springfield, O.
Boehmer's A. Sons, 168 W. Court st., Cincinnati, Ohio.
Boles, Levi & Son, Haymarket sq., c. Sudbury st., Boston, Mass.
Boyd, E. A., Sons, 167-199 S. 5th av., N. Y.
Buhl Sons & Co., 103 W. Woodridge st., Detroit, Mich.
Campbell, T. & Co., S. 21st & Mary sts., Pittsburgh, Pa.
Canastota Glass Co., Canastota, N. Y.
Carroll Decorative Plate Glass Mfg. Co., 314 N. High st., Balt., Md.
Chambers, A. & D. H., S. 6th, c. Bingham st., Pittsburgh, Pa.
Chambers, Calder & Co., 11-12 Exchange pl., Providence, R. I.
Clark, Hurd & Co., Bernhard's Bay, N. Y.
Clements, A. L., 96 W. 2d st., Cincinnati, O.
Cleveland Window Glass Co., 130 Champlain st., Cleveland, O.
Cohansey Glass Mfg. Co., 32 N. 4th st., Phila., Pa.
Cohn, Jacob C., 1060 3d av., N. Y.
Collins, W., 130-132 5th st., Troy, N. Y.
Cowen, N. & Son, 207 Canal st., N. Y.
Crystal Window Glass Co., Bellaire, O.
Cunningham, D. O., 2130 Jane st., Pittsburgh, Pa.
Cunninghams & Co. (Ltd.), S. 26th & Mary sts., Pittsburgh, Pa.
Davis, Henry M., 168 E. 110th st., N. Y.
Davis, James E. & Co.,29 Larned st., W. Detroit, Mich.
Dodds, J. J. & Co. 51-53 Shelby st., Detroit, Mich.
Davis, M., 1620 3d av , N. Y.
Dean, Godfrey & Co., 167 Griswold st., Detroit, Mich.
Depauw's American Plate Glass Works, c. 10th & R. R. av., New Albany, Ind.
Diehl, W. W., Springfield, O.
Dougherty, Elliott & Morrison, 83 Wooster st., N. Y.
Duncan, Campbell & Co., 21st st., South Side, Pittsb'gh, Pa.
Dunham, T. C., 68 Murray st., N. Y.
Eisendrath, B. W. & Co., 117 Lake st., Chicago, Ill.
Ely, Son & Hoyt, Clyde, N. Y.
Emory & Co., 142 W. Fayette st., Balt., Md.
Enterprise Window Glass Co., Bellaire, O.
Farrand, Williams & Co., 11 Larned st., c. Detroit, Mich.
Fine, Isaac, 102 Maiden la., N. Y.
Finkenstein, Davis, 413 4th av., N. Y.
Fitzpatrick, J. & Co., 28 N. Moore st., N. Y.
Fox & Fox, 115 Dearborn st., Chicago, Ill.
Franklin, Gabriel, 204 8th av., N.Y.
French, Samuel H. & Co., c. York av. & Callowhill st., Phila., Pa.
Garrison, John H., 209 Hudson st., N. Y.
Getsinger & Son, Bridgeton, N. J.
Glenny, Wm., Glass Co., 45 Race st., Cincinnati, Ohio.
Gold, Zachariah, 87 Bleecker st., N. Y.
Goldman, E., 2220 3d av., N. Y.
Goldman, Frank, 1322 3d av., N. Y.
Goldstein, Abraham, 27 John st., N. Y.
Goldstein, D., 227 W. 31st st., N. Y.
Goldstein, Harris E., 653 2d av., N. Y.
Goshorn, A. O., 17 Wiggins' Blk, Cincinnati, O.
Grant, E., 569 9th av., N. Y.
Green, Wolf, 161 W. 27th st., N. Y.
Grossman, Fischer, 60 W. B'way, N. Y.
Haft, Isaac, 350 W, 42d st., N. Y.
Haft, J. S., 182 E. 109th st., N. Y.
Haft., N., 39 Maiden la., N. Y.
Harris, Levy, 89 Liberty st., N. Y.
Heartfield, C. H. & Co., 378 Canal st., N. Y.
Heidt, Louis & Bros., Boerum and White sts., B'klyn, N. Y.
Heroy & Co., 56 N. 7th st., Phila., Pa.
Heroy & Marrenner, 149 Michigan st., Chicago, Ill.; 125 S. 5th av., N. Y.
Hills., Turner & Co., 243 State st., Chicago, Ill.; 193 State st., Boston, Mass.
Hires & Co., 719 Filbert st., Phila., Pa.; Quinton, N. J.
Holbrook Bros., 85-89 Beekman st., N. Y.
Holden, R. T., 53 Frankfort st., Cleveland, O.
Ihmsen Glass Co, (Ltd.) (The), S. 14th and Muriel sts., Pittsb'g, Pa.
Isaacs, E., 59 Columbia st., N. Y.
Jacobson, Adolph, 839 6th av., N. Y.
Jacobson, Leo. B., 102 Chambers st., N. Y.
Jacobs, Solomon, 218 Canal st., N. Y.
Jones & Townsend, Millville, N. J.
Kearns, Gorsuch & Co., Zanesville, O.

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Kimball, Geo. F., 315-321 Wabash av., Chicago, Ill.
King, Wm. & Bro., 2 N. Liberty st., Balt., Md.
Knaggs, F. P., 211 Freeman av., Cincinnati, O.
Knopf, Nathan, 210 E. 121st st., N. Y.
Kohen, Wolf, 529 6th av., N. Y.
Kolbe, J., 191 W. 5th st., Cincinnati, O.
Kory, Herman, 252 W. 30th st., N. Y.
Kommel, S., 35 Canal st., N. Y.
Krapp, G., Springfield, O.
Kurtz, J., 376 Central av., Albany, N. Y.
Kyle, C., 387 Bond st., Cleveland, O.
Lambert Bros., 53-55 Brattle st., Boston, Mass.
Leffingwell Glass Co., 67 St. Clair st, Cleveland, Ohio.
Levi, Joseph, 131 Hudson st., N. Y.
Lewis, Isaac, 24 James st., N. Y.
Long, E. & Co., 191 Clinton st., Cincinnati, O.
Lorenz, J., 540 Washington st., Buffalo, N. Y.
Lovering, Wm. B., 80 Portland st., Boston, Mass.
Lowe Bros., Dayton, O.
Ludlow, C., Springfield, O.
Lucas, H. G., 258 Pearl st., Cleveland, O.
Lucas, John & Co., 141-143 N. 4th st., Phila., Pa.; 89 Maiden la., N. Y.
McArdle, P. J., Church, c. Arch sts., Albany, N. Y.
McCully, Wm. & Co., 104-106 Wood st., Pittsb'g, Pa.
McFadden & Reed, 46 College pl., N. Y.
McKee, S. & Co., Carson and S. 13th sts., Pittsburgh, Pa.
McMahon, P. F., 157 Wooster st., N. Y.
Malaga Glass & Mfg. Co., 400 Chestnut st., Phila., Pa.
Marks, Abraham, 1133 2d av., N. Y.
Max, B., 60 Montgomery st., Jersey City, N. J.
Meadville Glass Co., Meadville, Pa.
Mentz, Joseph, 269 Division st., N. Y.
Miles, James, 89 4th av., N. Y.
Mississippi Glass Co., St. Louis, Mo.
Moore, J. M. & Co., 370 Central av., Cincinnati, Ohio.
Morris, S., 764 8th av., N. Y.
Morris, Theo. W. & Co., 27 Chambers st., N. Y.
Myers & Lafferty, Springfield, O.
Nauvoo Glass Works, 69 Water st., Pittsburgh, Pa.
Newfield, S., 64 Montgomery st., Jersey City, N. J.
Newman, Wm. J., 242 W. 27th st., N. Y.
Noel, Leon, 449 W. 14th st., N. Y.
O'Leary Bros. & Co., 301 Wood st., Pittsburgh, Pa.
Page, Harding & Co., 118 Milk st., Boston, Mass.
Paul, M., 178 av. A, N. Y.
Philip Semmer Glass Co. (Ltd), 12-14 Desbrosses st., N. Y.
Phillips & Co., S. 19th and Mary sts., Pittsburgh, Pa.
Pick, Louis, 413 5th st., N. Y.
Pierce & Coleman, Dayton, O.
Pittsburgh Plate Glass Co., Creighton, Pa.
Poellmann, Daniel, 94 Warren st., N. Y.
Post, J. C., 20 Swan st., Buffalo, N. Y.
Quaker City Window Glass Co. (The), Quaker City, O.
Randle, W. & Son, 337 W. 5th st., Cincinnati, O.
Rawle, Geo., 725 7th av., N. Y.
Rechenberg, Chas. J. G., 10 Desbrosses st., N. Y.
Reid, Wm., 73 Larned, W., Detroit, Mich.
Rice, J. H. & Co., 13 Quincy st., Chicago, Ill.
Rooch, James, 283 Woodward av., Detroit, Mich.
Roberts, David H., 144 S. 5th av., N. Y.
Roberts & Rich, 144 S. 5th av., N. Y.
Rossell, J. J., Dayton, O.
Rowan & Kelly, 79-81-83 Portland st., Boston, Mass.
Russell, J. W. & Co., 294 Pearl st., N. Y.
Schmertz, E. C., 97 1st av., Pittsb'g, Pa.
Schmertz, R. C. & Co., 130 1st av., Pittsb'g, Pa.
Schonertz, R. & Co., Columbus, O.
Seim, Henry & Co., Howard and Fayette sts., Balt., Md.
Semon, Bache & Co., 451 Greenwich st., N. Y.
Shepiro, Herman, 1067 2d av., N. Y.
Sheld, Max, 2326 2d av., N. Y.
Sherburne, R., 20-22 Canal st., Boston, Mass.
Shoemaker, B. H., 205 N. 4th st., Phila., Pa.
Sitler, W. R. & Co., 707 Filbert st., Phila., Pa.
Smith, Abel & Co., 69 Carson st., Pittsb'g, Pa.
Spindler & Robinson, 210 Gratiot av., Detroit, Mich.
Spitz & Henschel, 172 7th av., N. Y.
Sprague, Smith & Co., 205 Randolph st., Chicago, Ill.
Standard Window Glass Works, Woodbury, N. J.
Stewart, Estey & Co., 2221 Jane st., Pittsb'g, Pa.
Stone, S., 195 Canal st., N. Y.
Streator Glass Co., Streator, Ill.
Sussman, J., 208 3d av., N. Y.
Sutphen & Co., 22 Desbrosses st., N. Y.
Swindell Bros., 10 E. Lombard st., Balt., Md.
Talbott, C. R. Co. (The), 26 W. 3d st., Cincinnati, Ohio.
Talley, Chas. E., 1011 9th av., N. Y.
Teachout, A. & Co., 42-46 Michigan st., Cleveland, O.
Thomas & Co., 1233 Filbert st., Phila., Pa.
Thompson's, John L. Sons & Co., 161 River st., Troy, N. Y.
Thorne, A. & Co., 309 River st., Troy, N. Y.
Treadway, A. & Co., 108 W'ward st., Detroit, Mich.
Tyler & Hippach, 149 Michigan av., Chicago, Ill.
Union Glass Co., Bellaire, O.
Van Cleve Glass Co., 247 Viaduct st., Cleveland, Ohio.
Vanhorne, Griffen & Co., 131 Franklin st., N. Y.
Viergirer, J., 9 Swan st., Buffalo, N. Y.
Walton, H. J. B., 19 N. 10th st., Phila., Pa.
Wamhaft, Geo. & Co., 69 Water st., Pittsb'gh, Pa.
Warrick & Stanton, Glassborough, N. J.
Watt, J. H. & R. R., Barnesville, O.
Watton, H. J. B., Jr., 19 N. 10th st., Phila., Pa.
Weinberg, Louis, 19 Forsyth st., N. Y.
Wetherald & Wells, Massi'lon, O.
Whitney Bros., 226 Front st., Phila., Pa.
Whitney & Wilson, 16 Chapman pl., Boston, Mass.
Wightman, Thos. & Co. (Ltd.), 209 Wood st., Pittsb'gh, Pa.
Window Glass Co., Bridgeton, N. J.
Wise, Moses & Co., 87-89 Portland st., Boston, Mass.
Witt, Elias, 285 Broome st., N. Y.
Wolf, Howard & Co., 111 Wood st., Pittsb'gh, Pa.
Young, Theo. H., 3049 3d av., N. Y.
Ziegler, J. R., Peoria, Ill.

Globes—Lantern.

Gillinder & Sons, Oxford & Howard sts., Phila., Pa.
Gleason Mfg. Co., E. P., Mercer & Houston sts., N. Y.

Glue.

Anderson, John M., Salem, Mass.
Armour Glue Works, 205 La Salle st., Chicago, Ill.
Armour & Co., 182 Duane st., N. Y.
Arndt, Herman, Zanesville, O.
Austin & Eddy, 117 & 119 Broad st., Boston, Mass.
Bacon, J. Willard, Ayer, Mass.
Baeder, Adamson & Co., 67 Beekman st., N. Y.; 182 E. Lake st., Chicago, Ill.; 730 Market st., Phila., Pa.
Baeder Glue Co. (The), S. W. c. Pearl & Main sts., Cincinnati, O.
Baeder, Wm. A. Glue Co., 283 Pearl st., N. Y.
Bartlett, Moses J., East Salisbury, Mass.
Behr, Herman & Co., 75 Beekman st., N. Y.; 201 E. Randolph st., Chicago, Ill.
Berry Bros., Lieb & Wight, Detroit, Mich.
Bloodgood, I. F., Williamsport, Pa.
Brower, A., & Son, Gloversville, N. Y.
Brown, Geo. W., Marblehead, Mass.
Brown, Wm. H., Peabody, Mass.
Buffalo Glue Works, Buffalo, N. Y.
Bullock, John & Son, Balt., Md.
Burns, E. Reed, 194 Water st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Carter, Dinsmore & Co., 62 Cliff st., N. Y.
Carteret Chemical Co., 115 B'way, N. Y.
Chicago Glue Co., 216 E. Lake st., Chicago, Ill.
Chladek & Stupetsky, Manitowoc, Wis.
Church, L. H., E. Onondaga, N. Y.
Cilley, Brad. J., Buffalo, N. Y.
Conrad & Kammerer, New Albany, Ind.
Coulson, E. L., Balt., Md.
De Clyne, Chas., New Durham, N. J.
Deike, D. F. & Son, 602 W. 52d st., N. Y.
Deike, F. & Son, 602 W. 52d st., N. Y.
Delany & Co., 306 Pearl st., N. Y.
Duche, T. M. & Sons, 101 Water st., N. Y.
Dunn, Thos. W., 47 Beekman st., N. Y.
Evans, Richard & Son, Buffalo, N. Y.
Farley, R. H. & Co., 108 State st., Boston, Mass.
Ferdinand, L. V. & Co., 257 Federal st., Boston, Mass.
Fischer Bros., Delray, Mich.
Fuller Mfg. Co., 43 S. Franklin st., Chicago, Ill.
Gardiner, Arthur K., 4 Cedar st., N. Y.
Gilliland, Robert M., Wheeling, W. Va.
Gloucester Isinglass & Glue Co., Gloucester, Mass.
Grand Rapids Glue Co., Grand Rapids, Mich.
Greene, J., 253 Pearl st., N. Y.
Haines, Ebenezer H., 140 E. Wash'n st. (Room 14), Chicago, Ill.
Hall, Francis, Hudson, N. Y.
Harris, A. W. & Co., 82 Cortlandt st., N. Y.
Hedges, James E., Elizabethport, N. J.
Herzfelder, Bernhard, 55 Grand st., N. Y.
Hewitt, C. B. & Bros., 48 Beekman st., N. Y.
Hodge, Alfred & Co., 108 Broad st., N. Y.
Hoeveler, W. A. Mfg. Co., Pittsb'g, Pa.
Holt, Jonathan & Co., Lowell, Mass.
Holthusen, Alexander, 383 Pearl st., N. Y.
Howland & Son, Athens, N. Y.
Hoyt, Arthur S., 126 Chambers st., N. Y.
Isaacs, S. & Co., 299 Pearl st., N. Y.
James & Bro., Ludlow av., Cincinnati, O.
Jones, Benjamin M., 38 Spruce st., N. Y.
Jurgens, C. & Son, Sacramento, Cal.
Keene Glue Co., Keene, N. H.
King, D., Webster & Co., 52-54 Wabash av., Chicago, Ill.; 407 N. 3d st., St. Louis, Mo.; 28 Pearl st., N. Y.
King, John & Son, 141 Maiden la., N. Y.
Knight, L. A., 104 Reade st., N. Y.
Kreismann, P. & Co., 216 E. Lake st., Chicago, Ill.
Lamprecht, Kaiser & Co., Winona, Minn.
Lane, Francis T. L., Newark, N. J.
Leibundgut, E. & Co., 12 Old st., N. Y.
LePage Liquid Glue and Cement Co., Gloucester, Mass.
Leserman, Philip, 275 Pearl st., N. Y.
Lewis, John B., 18 N. William st., N. Y.
Levan, Joseph, Reading, Pa.
Lister's Agricultural Chemical Works, 159 Front st., N. Y.
Lister, Joseph, c. Elston st. and Fullerton av., Chicago, Ill.
Magnus, S. & Co., 275 Pearl st., N. Y.
Michigan Carbon Works, Detroit, Mich.
Milligan & Higgins Glue Co., 222 Front st., N. Y.
Nathan & Wight, 127 W. B'way, N. Y.
New England Glue Co., Guildford, Conn.
Northwestern Fertilizing Co., 45th st. and Center av. stk. yds., Chicago, Ill.
Oettinger, Bernhard J., 298 Pearl st., N. Y.
Pashley, Francis, Trenton, N. J.
Peter Cooper's Glue Factory, 17 Burling sl., N. Y.
Pitts & Sesure, Buffalo, N. Y.
Reimherr & Co., Jersey City., N. J.
Rohrer & Morrow, Harrisburg, Pa.
Russia Cement Co., Gloucester, Mass.
Salomon, L. A. & Bro., 216 Pearl st., N. Y.
Sanders, Robert, Urbana, O.
Schall Bros., Erie, Pa.
Schmitt, Henry G., Madison, Ind.
Schnetble, John, St. Louis, Mo.
Schneidt, August, Muskegon, Mich.
Schwab, Joseph, Louisville, Ky.
Searles, Wm. L., Lynn, Mass.
Seavey, G. H., Hallowell, Me.
Sondheim, Alsberg & Co., 54 Maiden la., N. Y.
Souther, Chas. N., Napa City, Cal.
Strong, Frederick V., 181 Pearl st., N. Y.
Tamm, Max & Co., 23 S. Main st., St. Louis, Mo.
Thurston, F. W. & Co., 29 River st., Chicago, Ill.
Upton, George, 239-241 Franklin st., Boston, Mass.
Waddell, R. J. & Co., 52 Beekman st., N. Y.
Wahl Bros., 238 E. Randolph st., Chicago, Ill.
Wisdom & Co., 206 E. Lake st., Chicago, Ill.

Glue Heaters.

Nason Mfg. Co., 71 Beekman st., N. Y.
Pancoast & Maule, 245 S. 3d st., Phila., Pa.

Gold and Silver Leaf Mfrs.

Abbey, C. & Sons, 230 Race st., Phila., Pa.
Ahammer, C., 30 Cambridge av., Jersey City, N. J.
Ashmead, J. H. & Son, Hartford, Conn.
Auer, Henry J., 507 Poplar st., Phila., Pa.
Auner, H. D., 1038 Ridge av., Phila., Pa.
Dennis, Thos., Buffalo, N. Y.
Bonner, G., 74 Fulton st., N. Y.
Cabot, Edwin S., 83 Sudbury st., Boston, Mass.
Carfoot Bros., 15 Howard st., N. Y.
Clifton & Cavanaugh, 1319 S. 15th st., Phila., Pa.
Coffin, F. H., Hyde Park, Mass.
Cook, C., 386 Broome st., N. Y.
Cottier, C. H., 173 Thompson st., N. Y.
Davis, G. W., 37 Hawley st., Boston, Mass.
Dennis, T., 391 Washington st., Buffalo, N. Y.
Deupert, A., 6 N. Front st., Balt., Md.
Dickson, J. & Sons, 38 Watts st., N. Y.
Drew, J. L. & Son, 3 Province Court., Boston, Mass.
Dunlevy, J. B., 138 3d av., Pittsburgh, Pa.
Dwyer, J., 200 Centre st., N. Y.
Eakins, W. H., 37 N. 10th st., Phila., Pa.
Ebrey, H. & Son, 919 Sergeant st., Phila., Pa.
Fogg, F. H. & Co., Hyde Park, Mass.
Gold & Merryweather, 258 Navy st., B'klyn, N.Y.
Harris, G. E., 330 Broome st., N. Y.
Harwood, F. W., Springfield, Mass.
Hastings & Co., 819-821 Filbert st., Phila., Pa.
Henke, R., 184 Hester st., N. Y.
Henry, T. J., 16 Centre st., N. Y.
Heritage, G., 404 Central av., Jersey City, N. J.
Hess, J., 515 Sedgwick st., Chicago, Ill.
Hickson, S., 559 Broome st., N. Y.
Horn, J. H., 486 N. Wells st., Chicago, Ill.
Keely, J. J., 4 Spring st., N. Y.
Kemp, W. H., 176-178 Hudson st., N. Y.
Kirchmer, J., 173 Race st., Cincinnati, O.; 36 E. 5th st., N. Y.
Krieger, G. & Son, Newport, Ky.
Lauriat, C. P., 16 Harvard pl., Boston, Mass.
Lauriat, G. A., 16 Harvard pl., Boston, Mass.
Longmore, J. S., 4 Sullivan st., N. Y.
McEntee, T., 12 Watts st., N. Y.
Maine, C. E., 707 N. 9th st., Phila., Pa.
Maley, P., 185 Bayard st., B'klyn, N. Y.
Morgan, Hastings & Co., 819 Filbert st., Phila., Pa.
Nelmns, Henry & Son, 46 N. 9th st., Phila., Pa.
Newman, J. B., 202 Post st., San Francisco, Cal.
Ney, J. M. & Co., Hartford, Conn.
Nickolds, A. J., 238 McDonough st., B'klyn, N.Y.
Ostrom, E., 11 Chapel st., Albany, N. Y.
Perry, C. F., 419 Gold st., B'klyn, N. Y.
Pimm, W., 103 Friendship st., Providence, R. I.
Ransley, H. C., 319 Wash'n av., Phila., Pa.
Reeves, A. H., 149 Monroe st., Chicago, Ill.
Reeves, D., 8 W. 3d st., Cincinnati, O.
Riker, J. T., 116 Sullivan st., N. Y.
Riley, J. H., 138 W. Fayette st., Balt., Md.
Robley, W., 525 Lorain st., Phila., Pa.
Roe, N., 97 Noble st., Brooklyn, N. Y.
Scardefield, J. H. E., 455-57 E. 134th st., N. Y.
Schultz, M. & Son, 152 E. Houston st., N. Y.
Schultz & Co., 25 St. Mark's pl., N. Y.
Simon, W., 19 Chrystie st., N. Y.
Snow & Co., 12 Post st., San Francisco, Cal.
Swift, Thomas & Sons, 417 Exchange st., Rochester, N. Y.
Tickner, A. P., 53 New Chambers st., N. Y.
Tolman, J. P. & Son, 727 Filbert st., Phila., Pa.
Truesculer, P., 415 S. Wash'n st., Balt., Md.

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Twomey, E. H., 1219 Olive st., Phila., Pa.
Valleaw, W., Jr., 506 Broome st., N. Y.
Wigley, J. T., 11 Goerck st., N. Y.
Young, S. G., 37 N. 10th st, Phila., Pa.
Young, T. H., 183 Avenue B, N. Y.

Gongs.

Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Bevin Bros. Mfg. Co., East Hampton, Conn.
Gong Bell Mfg. Co., East Hampton, Conn.
Greeley, E. S. & Co., 5 Dey st., N. Y.
McNab & Harin Mfg. Co., 56 John st., N. Y.
Union Water Meter Co., Worcester, Mass.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. x.

Governors—Gas.

Cooper, J. O. & Co., 519 5th st., Louisville, Ky.
Foster, J. M. Washington Bldg., N. Y.
Gregory, Geo. H., 337 Broadway, N. Y.
Shaw, Thos., 915 Ridge av., Phila., Pa.

Governors—Hydraulic.

Gillespie Governor Co., 49 Purchase st., Boston, Mass.

Governors—Marine.

Green, W. H., Chester, Pa.

Governors—Steam.

Adams, Enos, Bennington, Vt.
Albany Steam Trap Co., 78 & 80 Church st., Albany, N. Y.
Allen Governor Co., 98 Milk st., Boston, Mass.
Badger Bros., West Quincy, Mass.
Craig, W. H. & Co., Lawrence, Mass.
Dewey, Edw. & Co., 34 Oliver st., Boston, Mass.
Donegan & Swift, 174 Fulton st., N. Y.
Gardner Governor Co., Quincy, Ill.
Gillespie Governor Co., 49 Purchase st., Boston, Mass.
Hartford Governor Co. (The), 345 Main st., Hartford, Conn.
Judson, J. & Son, Rochester, N. Y.
Leonard & McCoy, 118 Liberty st., N. Y.
Le Van, W. Barnet, 3007 Baring st., Phila., Pa.
Lonergan, J. E. & Co., 211 Race st., Phila., Pa.
Mason Regulator Co., 22 Central st., Boston, Mass. 22.
New England Machine Co., 29 Haverhill st., Boston, Mass.
Packard, O. L., Milwaukee, Wis.
Park & Lacy, 8 California st., San Francisco, Cal.
Pickering, T. R. & Co., Portland, Conn.
Pratt & Cady Co., Hartford, Conn.
Skinner Engine Co., Erie, Pa.
Stout, S., 227 Main st., Cincinnati, O.
Tabor Mfg. Co., 111 Liberty st., N. Y.
Wright Machine Co., Worcester, Mass.

Granite Producers.

Bodwell Granite Co., Rockland, Me.
Hallowell Granite Co., Hallowell, Me.
Hurrican Island Granite Co., Rockland, Me.

Grates and Grate Bars.

Adams, Hawley, ft. E. 26th st., N. Y.
Ætna Grate Bar Co., 110 Liberty st., N. Y.
Ætna Grate Co., Elm, c. Spruce st., Cleveland, Ohio.
Allen Iron Works, Adams, Mass.
American Grate Bar Co., 1338 Chestnut st., Philadelphia, Pa.
American Steam Appliance Co., 62 Sudbury st., Boston, Mass.
American Water Bar Grate Co., 1293 Arch st., Phila., Pa.
Argand Grate Bar Works, 110 Liberty st., N. Y.
Ashcroft, John (The), Patent Grate Bar and Furnace Door Mfg. Co., 73 Gold st., N. Y.
Blettner Mfg. Co., 884-894 Central av., Cincinnati, O.
Clapp, H. W. & Co., Concord, N. H.
Clarke, G. H., 110 Liberty st., N. Y.
Cordesman's, H. J. Sons, 137 W. 2d st., Cincinnati, O.
David Bradley Mfg. Co., 63 N. Desplaines st., Chicago Ill.
Dorrance Grate (The), 118 N. 8th st., St. Louis, Mo.
Dulaney, H. S. & Co., 25 S. Gay st., Balt., Md.
Estabrook, R. & Son, 198-202 W. 2d st., S. Boston, Mass.
Fairbairn Grate Bar Co., 33 35 Liberty st., N. Y.
Fairbairn Mfg. Co., 272 Purchase st., Boston, Mass.
Fisher, John J., Allentown, Pa.; 91 Liberty st., N. Y.
Greenfield, W. & G., 5th st., c. Cross, E. Newark, N. J.
Griffin & Harris, Arlington Heights, Ill.
Hill Grate Bar Co., Manchester, N. H.
Kerstine, H. C., 182 Outhwaite av., Cleveland, O.
Lehman, W. H., 154 Lake st., Chicago, Ill.
Lombard, Geo. R. & Co., Augusta, Ga.
McLagon Foundry Co., 26-30 Audubon st., New Haven, Conn.
Miller Iron Co., Providence, R. I.
Moore, C. B. & Co., 76 Pearl st., Boston, Mass.
National Iron Works, New Brunswick, N. J.; 18 Cortlandt st., N. Y.
New England Roller Grate Co., 26 Milk st., Boston, Mass.
Parson, H. E., 35 Liberty st., N. Y.
Providence Steam Trap Co., 22 Codding st., Providence, R. I.
Reilly Grate Bar Co., 110 Liberty st., N. Y.
Ryder Shaking Grate Bar Co., 206 B'way, N. Y.
Salamander Grate Bar Co., 110 Liberty st., N. Y.
Thompson & Bushnell, 120 Liberty st., N. Y.
Tubbs & Humphreys, Cohoes, N. Y.
Tupper, W. W. & Co., 206 West st., N. Y.
U. S. Rocking Grate Bar Co., 154 Lake st., Chicago, Ill.
Vaughn, A. H. & Sons, Norwich, Conn.
Walsh, J. D., Albany, N. Y.
Weiler, A., Albany, N. Y.
Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.
Withenbury, C. W., 27 Glenn Bldg., Cincinnati, Ohio.

Grating—Platform.

Jackson Architectural Iron Works, 315 E. 28th st., N. Y.

Gratings—Car.

Lauce Sons, 4277 Main st., Germantown, Pa.

Grease—Axle.

Alexander & Co., 167 Lacock st., Allegheny, Pa.
Bachus, H. M. Oil Co., 52 Norton st., Buffalo, N. Y.
Barrett, Waters & Lewis, 2d st., c. Walnut, Cincinnati, O.
Bauer, W., 915 N. 26th st., Phila., Pa.
Boaz & Co., 32 Broadway, N. Y.
Central Oil Co., 28 E. Pearl st., Cincinnati, O.
Chicago Lubricant Mfg. Co., 51 Dearborn st., Chicago, Ill.
Clark, Murray & Co., 35 Rosebud st., Chicago, Ill.
Condensed Lubricating Oil Co., River rd., Cincinnati, O.
Cook, A., 313 West st., N. Y.
Covert, H. M., 203 Sac'o st., San Francisco, Cal.
Cowles & Co., 180 Fulton st., N. Y.
Czarniecki, J. H., 43 1st st., Allegheny, Pa.
Denlinger Bros., 90 Water st., Pittsburgh, Pa.
Dixon Crucible Co., 229-239 Railroad av., Jersey City, N. J.; 68 Reade st., N. Y.
Dorr's, J. O., Son, 46 Harrison st., N. Y.
Duffy, Michael, 561 W. 47th st., N. Y.
Eagle Oil Co., 52 Sycamore st., Cincinnati, O.
Emery & Co., 23 7th st., Pittsburgh, Pa.
Empire Axle Grease Co., 600 W. 5th st., Cincinnati, O.

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Fink, W. J., Paca, c. Franklin st., Balt., Md.
Fiske Bros., 61 Water st., N. Y.
Foote, H., 427 E. 25th st., N. Y.
Forsaith, J. L. & Co., Main, n. 11th st., Pittsb'g, Pa.
Fralich, E. C., Ann, n. Stevenson st., Pittsb'g, Pa.
Frazer, S. & Co., Galena, Ill.
Frazer Lubricator Co., 73 Murray st. N. Y.; 31 Superior st., Chicago, Ill.
Gay, I. P. & Co., 8th, c. Evans st., Cincinnati, O.
Hanna Plumbagoine Co., 214 Randolph st., Chicago, Ill.
Hardy, J. J., 788 3d av., B'klyn, N. Y.
Ilsley, Doubleday & Co., 159 Front st., N. Y.
John Thompson Co. (The), Court, c. Broadway st., Cincinnati, O.
Kiely, J. M., 147 Maiden la., N. Y.
Lamdin, T. G., 600 W. 5th st., Cincinnati, O.
Lambert & Greene, 148 Natoma st., San Francisco, Cal.
Leib Lubricating Co., 196 Chicago st., Buffalo, N. Y.
Lister's Agricultural Chemical Works, Lister av., Newark, N. J.
Lombaret Mfg. Co., 236 N. Water st., Phila., Pa.
Longley, Garlick & Co., Front, b. Walnut and Vine sts., Cincinnati, O.
Lovell, Tracy & Co., 71 Asylum st., Hartford, Conn.
McDonald, A. & Co., 31 W. Pearl st., Cincinnati, Ohio.
Mandel, A. G. & Co., 251 Front st., N. Y.
Marshall, G., 52 Sycamore st., Cincinnati, O.
Meriam & Morgan Paraffine Co., 87 Central way, Cleveland, O.; Clark, c. 16th st., Chicago, Ill.
Monarch Oil Co., 25 Main st., Cincinnati, O.
Moody, H. S., 16th, c. Moore st., Phila., Pa.
National Lubricating Co., 55 W. Canal st., Cincinnati, O.
Nichols, C. H., Woburn, Mass.
Ohio Oil Works, Marietta, O.
Pittsburgh Grease & Oil Co.. 457 Beaver st., Allegheny, Pa.
Pulver, P. & Sons, 257 West st., N. Y.
Read, E. B., 16 1st st., San Francisco, Cal.
Robertson, A., 179 15th st., Jersey City, N. J.
Sheard, J., 4140 Paul st., Phila., Pa.
Stainsby, Wm., 881 Broad st., Newark, N. J.
Stuart, D. F. & Co., 8 State st., Chicago, Ill.
Tough, Rutherford & Co., 13 E. Lombard st., Balt., Md.
U. S. Axle Lubricating Co., 1541 B'way, N. Y.
Wagner, C. P. & Co., 20 Broadway, Cincinnati, Ohio.
West, C. & Son, 18 Lombard st., Balt., Md.
White's Golden Lubricating Co., 63 W. Front st., Cincinnati, O.
Worden, W. H., 223 Sacramento st., San Francisco, Cal.
Yates & Co., 113 Front st., San Francisco, Cal.

Grease—Cups.

Colville & Stewart, 108 Lake st., Chicago, Ill.
Delaney, H. J. & Co., Milwaukee, Wis.
Dunnigan Cup & Grease Co., 111 Seneca st., Cleveland, O.
Main Bros., 61 South st., N. Y.

Grease—Gear.

Dixon, Jos., Crucible Co., Jersey City, N. J.
Johnson, H. J., 530 Water st., N. Y.
Lovell, Tracy & Co., 71 Asylum st., Hartford, Conn.
Union Grease Co., 374 Atlantic av., Boston, Mass.

Grease—Machinery.

Buck Oil & Chemical Co., 205 E. Kinzie st., Chicago, Ill.
Dixon, Jos., Crucible Co., Jersey City, N. J.
Newark Lubricating Co., 149 Chestnut st., Newark, N. J.
Union Grease Co., 374 Atlantic av., Boston, Mass.

Grease—Railway Curve, Engine and Ferry Slip.

Newark Lubricating Co., 149 Chestnut st., Newark, N. J.

*Grease—Steamship.

Crescent Mfg. Co., 3 Michigan st., Cleveland, O.

Grinders—Car Box, Car Wheel and Centre Grinders.

Allentown Rolling Mills (The), Allentown, Pa.
Beall Grinder Co. (The), Decatur, Ill.
Betts Machine Co., Wilmington, Del.
Birkenhead, John, Mansfield, Mass.
Brown & Sharpe Mfg. Co., Providence, R. I.
Chilled Car Wheel Grinding Co., Carson, Nev.
Diamond Emery Wheel & Machine Co., 48 S. Canal st., Chicago, Ill.
Emerich & Vonderbehr, 193 Worth st., N. Y.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. **57.**
Field, J. A. & Co., St. Louis, Mo.
Foos Mfg. Co. (The), Springfield, O.
Garvin, E. E. & Co., 139-143 Centre st., N. Y.
Gilkerson Machine Works (The), Homer, N. Y.
Goulds & Austin, Chicago, Ill.
Grant Corundum Wheel Co., 351 Main st., Springfield, Mass.
Great Western Mill Co. (The), Cleveland, O.
Greeley, E. & S. Co. (The), 5-7 Dey st., N. Y.
Hardy Machine Co., Biddeford, Me.
Heaton's Bed Rock & Emery Works, Bainbridge, N.Y.
Herrick, W., Northampton, Mass.
Lutner, T. E., 1603 S. Front st., Phila., Pa.
Miller, L. J., Harrison av., Cincinnati, O.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Newell Universal Mill Co., 10 Barclay st., N. Y.
North Star Iron Works, Co., Minneapolis, Minn.
Post & Company, Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Ross, Charles, Jr., 31-33 S. 5th st., B'klyn, E. D., N. Y.
Schofield, Wm., Manayunk, Phila., Pa.
Simpson, J. S. & G. F., 26-36 Rodney st., B'klyn, E. D., N. Y.
Slate, Dwight, Hartford, Conn.
Standard Tool Co., Bond, c. Rockwell st., Cleveland, O. **49.**
Tanite Co, (The), Stroudsburg, Pa.
Union Stone Co., 38 Hawley st., Boston, Mass.
Waterbury Farrel Foundry and Machine Co., Waterbury, Conn.
Wilson Bros., Easton, Pa.
Winger Bros., Freeport, Ill.

Grinders—Emery.

Capital City Machine Works, Spring and Water sts., Columbus, O.
Chapman, F. M. & Son, Oldtown, Me.
Gallagher Mfg. Co., 18 State st., Lynn, Mass.
Getchell, J. S. & Son, Houlton, Me.
Gould, E., & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Heaton's Bed Rock and Emery Works, Bainbridge, N. Y.
Lehigh Valley Emery Wheel Co., Leighton, Pa.
Maslin, J. & Son, 165 1st st., Jersey City, N. J.
Middlebrook Elevator Mfg. Co., Detroit, Mich.
Power, L. & Co., 20 S. 23d st., Phila., Pa.
Smith, Emerson & Co. (Ltd.), Beaver Falls, Pa.
Springfield Glue and Emery Wheel Co., Springfield, Mass.
Wentworth Mfg. Co., 92 Pearl st., Boston, Mass.

Grinders—Paint.

Peninsular White Lead and Color Works, Detroit, Mich.

* Grinders—Tool.

Barnes, W. F. & John Co., 571 Ruby st., Rockford, Ill. **49.**

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Diamond Emery Wheel and Machine Co., Providence, R. I.
Emerson, Smith & Co., Beaver Falls, Pa.
Heaton's Bed Rock and Emery Works, Bainbridge, N. Y.
Hall Mfg. Co., Phila., Pa.
Star Tool Co. (The), Beverly, c. Mason st., Providence, R. I.
Stiles, N. C., Middletown, Conn.
Stiles & Parker Press Co. (The), Middletown, Conn.
Tanite Co. (The), Stroudsburg, Pa.
Union Special Sewing Machine Co., 28 White st., N. Y.

Grindstone Dressers.

Blake & Johnson, Waterbury, Conn.

Grindstones.

Beekford Stone Co., Cleveland, O.
Berea & Huron Stone Co. (The), 71-73 Wilshire Bldg., Cleveland, O.
Cleveland Stone Co., Cleveland, O.; Erie, c. Kingsbury st., Chicago, Ill.
Hotchkiss, Guy C., Field & Co., 624 E. 14th st., N. Y.
Lake Huron Stone Co., 34-36 Roberts st., Chicago, Ill.; Detroit, Mich.
McDermott & Berea Stone Co., Cleveland, O.
Mitchell, J. E., 310 York av., Phila., Pa.
Mussey, H. E. & Co., Elyria, O.
Obermayer, S., Foundry Supply Mfg. Co. (The), Cincinnati, O.
Pollard, Chas. F., Lynn, Mass.
Randolph, Geo. F., 30 Washington st., N. Y.
Western Grindstone Co., 34 Roberts st., Chicago, Ill.
Wood, Walter R., 283 Front st., N. Y.

Grips—Cable.

Anders, D. B., 2313 Ridge av., Phila., Pa.
Baltimore Car Wheel Co. (The), Balt., Md.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Gould, John H. & Gould & Co., 305-311 S. 2d st., Phila., Pa.
Jonson Foundry & Machine Co., 118th st. & H. R., N. Y.
Johnson, Tom L., Indianapolis, Ind.
Laclede Car Co., 4900 N. 2d st., St. Louis, Mo.
Lane & Bodley, Co., 267-283 Water st., Cincinnati, O.
Poole & Hunt, Balt., Md.
Providence Electric Supply Co., Providence, R.I.
Van Duzen & Tift, 102 & 104 E. 2d st., Cincinnati, O. **57.**
Wharton, Wm., Jr., & Co., 25th st. & Wash'n av., Phila., Pa.

Gutta Percha Goods.

Bishop Gutta Percha Co., 420 E. 25th st., N. Y.
Goodyear's India Rubber Glove Mfg. Co., 503-505 B'way, N. Y.
See, A. W. & Co., 1288 B'way, N. Y.

Hammers—Power, Steam and Drop.

Beaudry & Cunningham, 70 Kilby st., Boston, Mass.
Belden, R. A. Co. (The), Danbury, Conn.
Bement, Miles & Co., Callowhill & 21st st., Phila., Pa.; 120 B'way, N. Y.
Bradley & Co., Syracuse, N. Y.; 63 Murray st., N. Y.
Capital City Machine Works, Spring & Water sts., Columbus, O.
Cleveland Shipbuilding Co., Cleveland, O.
Crown Iron Works, 113 2d av., S.E., Minneapolis, Minn.
Cuyahoga Steam Furnace Co., Cleveland, O.
Dienelt & Eisenhardt, 1306 Howard st., Phila., Pa.
Dudgeon, Richard, 24 Columbia st., N. Y.
Duncan, W. P. & Co., Bellefonte, Pa.
Farrel Foundry and Machine Co. (The), Ansonia, Conn.
Forsaith, S. C. & Co., Manchester, N. H.
Hill, Clark & Co., 156 Oliver st., Boston, Mass.
Justice, Philip S. & Co., 14 N. 5th st., Phila., Pa.
Knowlton Mfg. Co., Elm st., Rockford, Ill.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lawrence Machine Co., Mason Bldg., Boston, Mass.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Long & Allstatter Co. (The), Hamilton, O.
Mackintosh, Hemphill & Co, (Ltd.), 12th, c. Extra st., Pittsburgh, Pa.
Marchessault, C., Minneapolis, Minn.
Merrill Bros., 467 Kent av., Brooklyn, E. D., N.Y.
Morgan Engineering Co., Alliance, O.
Plumb, Fayette R., Phila., Pa.
Pollock, Alex., 212 West st., N. Y. **32.**
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.
Sellers, William & Co. (Inc.), 1600 Hamilton st., Phila., Pa.
Southwark Foundry and Machine Co., Washington av. and 5th st., Phila., Pa.
Styles & Parker Press Co. (The), Middletown, Conn.
Tubular Barrow and Machine Co., 169 14th st., Jersey City, N. J. **32.**
Whitcomb Mfg. Co., Worcester, Mass.
Williams, White & Co., Moline, Ill.

Hammers and Sledges.

Allison, J. D., Cromwell, Conn.
Batty & Broadhead, Manistee, Mich.
Beaudry & Cunningham, 70 Kilby st., Boston, Mass.
Boker, Hermann & Co., 101-103 Duane st., N. Y.
Briggs, Albert, North Dighton, Mass.
Buffalo Hammer Co., Buffalo, N. Y.
Chevey, Henry, Hammer Co., Little Falls, N. Y.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Claffy, John, 48 Dey st., N. Y. **91.**
Gerow & Davenport, Linden, Mich.
Gould, Robert, 332 Broadway, N. Y.
Handy Hammer Co., 35 Sudbury st., Boston, Mass.
Harper Mfg. Co., Allentown, Pa.
Harrisburg Handle Co., Harrisburg, Pa.
Hartford Hammer Co., Hartford, Conn.
Hingston & Hill, 146 Virginia st., Buffalo, N. Y.
Humason & Beckley Mfg. Co., New Britain, Conn.
Iron City Tool Works, Penn av. and 23d st., Pittsb'g, Pa.
Johnson, Wm., Newark, N. J.
Kimball Mfg. Co., 17 Travers st., Boston, Mass.
Knapp & Cowles Mfg. Co., Bridgeport, Conn.
Kraeuter & Co., Newark, N. J.
Maydole & Co., Norwich, Conn.
Mead's, I. V., Tool Works, 370 ave. A, N. Y.
O'Neil, John, Albany, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Pratt & Whitney Co. (The), Hartford, Conn.
Warner, Marvin R. & Son., Cromwell, Conn.
Weed & Becker Mfg. Co. (The), 11 Gold st, N. Y.
Williams, C. A. & Co., Skowhegan, Me.

Hammers—Stone.

Ames Sword Co., Chicopee, Mass.
Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Arnold, J. H. & Son, Lyons, Mich.
Dickson Mfg. Co., Scranton, Pa.

Handles for Adzes, Axes, Picks and Tools.

Allex & Nixon, 64 Cedar st., N. Y.
Belford, J. H., Columbus Grove, O.
Briggs Iron and Tool Co., Findlay, O.
Brown & Wales, Burton, O.
Casper, Adolph, Mascoutah, Ill.
Chapin's, H. Son, Pine Meadow, Conn.
Cotton, Lemuel, Hiram, Me.
Crandall, C. W., Texas, Mich.
Findlay Stave and Handle Co., Findlay, O.
Fisher, H. M., Penacook, N. H.

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Flint, N. Ripley, E. Hiram, Me.
Fuller, W. R., Columbus Grove, O.
Gerow & Davenport, Linden, Mich.
Greenleaf, J. C. Mfg. Co., Greenleaf, Mass.
Jackson, T. E., Handle Co., Chillicothe, Mo.
Johnson, Samuel, Laclede, Mo.
Jones, J. F. & Son, Columbus Grove, O.
Knapp & Cowles, Mfg. Co. (The), Bridgeport, Conn.
McCutcheon, Samuel, Manor Station, Pa.
Montgomery & Co., 105 Fulton st., N. Y.
Morrison, John L. & Co., Detroit, Mich.
Novelty Wood Works, Union City, Pa.
O'Neill, J. W. & Son, West Grove, Ia.
Piper, B. H. & Co., Manchester, N. H.
Progler, C. H., Jackson C. H., W. Va.
Pryor, M. P., Breckenridge, Mo.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Tarplay, R. D., Utica, Mo.
Thompson, Henry G. & Sons, New Haven, Conn.
Turner, Day & Woodford Mfg. Co., 82 Chambers st., N. Y.
Union Hardware Co., Torrington, Conn.
Vanstone Mfg. Co., Providence, R. I.
Wadleigh, W., Rochester, N. H.

Hand Spikes.

Page, E. W. Co., 69 West st., N. Y.

Hardware—Car Builders and Cabinet Makers.

American Tool Co., 116 Chambers st., N. Y.
Artistic Bronze Co., 14 E. 14th st., N. Y.
Berbecker, E. N., 51 Wabash av., Chicago, Ill.
Bogardus & Ellaby, 117 West st., N. Y.
Bradford Joint Co., Plymouth st., Boston Mass.
Bunker, Wm. I., 84 Market st., Chicago, Ill.
Chicago Furniture Supply Co., 167 Randolph st., Chicago, Ill.
Christensen, Rudolph, 90 Chambers st., N. Y.
Conroy, P. J. & Co., 1603-1607 Catharine st., Phila., Pa.
Corbin Cabinet & Lock Co., Park st., New Britain, Conn.
Corbin, P. & F., New Britain, Conn.
Duer, Cummings & Co., Louisville, Ky.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass.; 117 Adams Ex. Bldg., Chicago, Ill. **25.**
Fechtman & Gade, 205 Canal st., N. Y.
Foster, Merriam & Co., 225 Canal st., N. Y.; Meriden, Conn.
Gibson, Parish & Co., 115 Worth st., N. Y.
Glaescher & Co., Main, c. Franklin st., Cincinnati, O.
Goetz & Kuver, 321 3d st., N. Y.
Gould's, M. Son, 105 Duane st., N. Y.
Hammacher, Schlemmer & Co., 209 Bowery, N. Y.
Harrington, George S., 18 Canal st., Boston, Mass.
Hewer & Brockschmidt, 173 Randolph st., Chicago, Ill.
Iverson, J. C. & Co., Milwaukee, Wis.
Langhorst Bros., 468 Main st., Cincinnati, O.
Little, C. E., 59 Fulton st., N. Y.
Loungsbury, G. H. & Co., 98 Main st., Cincinnati, O.
Lounsberry, Hidden & Campbell, Louisville, Ky.
Ludorici & Hiezenroeder, 118 Wooster st., N. Y.
Luetkemeyer, H. W., 150 Superior st., Cincinnati, O.
Meriden Malleable Iron Co., 42 Park pl., N. Y.; Meriden, Conn.
Munger, H. H. & C. L., 142 Lake st., Chicago, Ill.
New England Specialty Co., North Easton, Mass.
N. Y. Furniture Supply Co., 225 Canal st., N. Y.
The Chas. Parker Co., Meriden, Conn.
Patterson Bros., 27 Park row, N. Y.
Pickering, T. & A., Main, c. 5th st., Cincinnati, Ohio.
Quinn, W. H. & Co., 99 Chambers st., N. Y.
Rubelmann, Lucas, Hardware Co., 1939 N. Broadway, St. Louis, Mo.
Sargent & Co., Water st., New Haven, Conn.
Schenck's Adjustable Fire Back Co., 94 Market st., Chicago, Ill.
Shepard Hardware Co., Forest av., c. Niagara st., Buffalo, N. Y.
Smith & Egge Mfg. Co. (The), Lafayette, c. Allen st., Bridgeport, Conn.
Speyer Bros., 101 Bowery, N. Y.
Stanley Works, New Britain, Conn.
Stock, C. A. & Co., 118 Wooster st., N. Y.
Wayne, J. L., Jr., 140-142 Main st., Cincinnati, O.

Hardware—Ship Chandlery.

Bliss Bros., 170 Commercial st., Boston, Mass.
Laughlin, Thos. & Son, c. Centre and Commercial sts., Portland, Me.
Morss, Anthony S., 210-212 Commercial st., Boston, Mass.
Patterson Bros., 27 Park row, N. Y.
Shelton Brass Hardware Co., Birmingham, Conn.
Shepard Hardware Co., Buffalo, N. Y.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.
Tiebout, W. & J., 16-18 Chambers st., N. Y.
Torrey, J. G. & Son, 180-182 Main st., Rockland, Me.
Tucker, J. A., Jr., 167 South st., N. Y.
Wilcox, Crittenden & Co., Middletown, Conn.
Wilson Mfg. Co., New London, Conn.

Hardware—Steamship.

Bogardus & Ellaby, 177 West st., N. Y.
DeGraw, Aymer & Co., 84 South st., N. Y.
Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.
Morss, Anthony S., 210-212 Commercial st., Boston, Mass.
Shelton Brass Hardware Co. (The), Birmingham, Conn.

Hardware Specialties.

Acme Shear Co., Bridgeport, Conn.
Am. Bit Brace Co., Buffalo, N. Y.
Enterprise Mfg. Co., Phila., Pa.
Greene, Tweed & Co., 83 Chambers st., N. Y.
Paine, Diehl & Co., Phila., Pa.
Reid, A. H., 30th and Market sts., Phila., Pa.
Rex, A. C. & Co., Phila., Pa.
Saxton, E. R., Buffalo, N. Y.
Shepard Hardware Co., Buffalo, N. Y.
Underhill, Clinch & Co., 94 Chambers st., N. Y.
Wire Goods Co., Worcester, Mass.

Hardware—Punching and Drilling Machines.

Ferracute Machine Co., Bridgeton, N. J. **15.**
Tiebout W. & J., 16 Chambers st., N. Y.
Torrey, J. G. & Son, Rockland, Me.

Hardware—Street Car and Omnibus.

Adams & Westlake Mfg. Co. (The), 115 B'way, N. Y.; 110 Ontario st., Chicago, Ill.

Harness—Street Ry.

Aschenbach, Chas. F., 115 Chambers st., N. Y.
Brill, J. G., Co., Phila., Pa.
Claffy, John, 48 Dey st., N. Y. **91.**
Dickson, C. K., Louisville, Ky.
Dewilde, John, 11 Burling sl., N. Y.
Hilborn, Lena, 112 Chambers st., N. Y.
Hill, J. R. & Co., 123 Chambers st., N. Y.
Leckie, John & Co., 12 St. Mary Axe, E. C., London, Eng.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Morrison, Daniel W., 30 Warren st., N. Y.
Moseman, C. M. & Bro., 128 Chambers st., N. Y.
Peters & Calhoun Co., 33 Warren st., N. Y.
Pollock, Edw. H., 124 Chambers st., N. Y.
Pratt & Letchworth, Buffalo, N. Y.
Pugh & Russell, Stewart Bld., N. A.
Smith, Worthington & Co., 40 Warren st., N. Y.
Verplanck Bros., 92 Chambers st., N. Y.
Whitman Saddle Co., 118 Chambers st., N. Y.

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Hatch Covers.

Harrison Safety Boiler Works, 41 Dey st., N. Y.; Phila., Pa.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.: 12 Cortlandt st., N. Y.

Headlights and Lanterns.

Adams & Westlake Mfg. Co., 110 Ontario st., Chicago, Ill.; 78 Wash'n st., Boston, Mass.; 115 B'way, N. Y.
Cincinnati R'way Supply Co., 58 W. 2d st., Cincinnati, O.
Cross, J. E., 115 B'way, N. Y.
Dayton Mfg. Co., Dayton, O.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Hall, Edwin L., 402 Race st., Phila., Pa.
Jesup, F. W. & Co., 67 Liberty st., N. Y.
Kelly Lamp Co., 208 Mill st., Rochester, N. Y.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Smith, Josephine D., 352 Pearl st., N. Y.
Williams, I. A. & Co., Utica, N. Y.

Headlights for Electric Cars.

Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

Heaters—Car Fittings, Hose, Etc.

Gold, Edward E. & Co., Frankfort & Cliff sts., N. Y.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.

Heaters—Feed-Water.

Allen, William & Sons, Worcester, Mass.
Aller, A., 109 Liberty st., N. Y.
Atwood & McCaffrey, 60 3d av., N. Y.
Baragwanath & Son, Wm., 52 W. Div. st., Chicago, Ill.
Berryman, James, 125 N. 4th st., Phila., Pa.; 87 S. Canal st., Chicago, Ill.; 91 Liberty st., N. Y.
Bridgeport Boiler Works, Bridgeport, Conn.
Brown & King, Atlanta, Ga.
Clarkson, Frank M., Detroit, Mich.
Collins, Wm. & Son, ft. W. 21st st., N. Y.
Davis, J. B. & Son, Hartford, Conn.
Eastman, F. B., Portland, Ore.
Eckstein Feedwater Heater Co., Phila., Pa.
Feedwater Heater Co., St. Johnsbury, Vt.
Gibson, Wm. H., 35 S. Canal st., Chicago, Ill.
Goubert Mfg. Co., 18 Cortlandt st., N. Y.
Gray, Shook & Co., 5 2d av., Pittsb'g, Pa.
Hine & Robertson, 45 Cortlandt st., N. Y. **82.**
Hohenstein Mfg. Co., 49 Dey st., N. Y.; 46 N. 7th st., Phila., Pa.
Hoppes Mfg. Co., 30 E. Main st., Springfield, O.
Jarvis Engineering Co., 109 Liberty st., N. Y.; 61 Oliver st., Boston; 81 Lake st., Chicago.
Johnson, M. H., 140 Center st., N. Y.
Keefer, Horace A. & Co., 54 Sheidley Bldg., Kansas City, Mo. **88.**
Kensington Engine Works, (Ltd.), Phila., Pa.
McLaughlin, Geo. G., 49 Haverhill st., Boston, Mass.
Morse, Jas. O., 76 John st., N. Y.
National Pipe Bending Co., New Haven, Conn.
Phelps & Co., Springfield, O.
Racine Malleable and Wrought Iron Co., Racine, Wis.
Skinner Engine Co., Erie, Pa.
Standard Machine Works, Logan, O.
Stead, James C., 65 Kent st., Greenpoint, N. Y.
Stewart Heater Co., 37 Clinton st., Buffalo, N. Y.
Stillwell & Bierce, Dayton, O.
Wainwright Mfg. Co., 67 Oliver st., Boston, Mass.; 93 Liberty st., N. Y.
Warden, H., Germantown, Pa.
Watson, N. A., Erie, Pa.
Whiting Mfg. Co., Cedar Rapids, Ia.
Worcester Steam Boiler Works, Worcester, Mass.

Heaters—Freight Car.

Eastman Freight Car Heater Co., 50 State st., Boston, Mass.

Heating Apparatus.

Baker Heater Co. (The), 549 W. 33d st., N. Y.
Baker, Smith & Co., 79 W. Houston st., N. Y.; 81 Jackson st., Chicago, Ill.
Chase, R. G., 71 Kilby st., Boston, Mass.
Chilson Furnace Co., 101 Blackstone st., Boston, Mass.
Cline Mfg. Co., Chicago, Ill.
Detroit Heating and Lighting Co., Detroit, Mich.
Detroit Steam Radiator Co., Lincoln av., Detroit, Mich.
Dreher & Co., 188 Pearl st., N. Y.
Erie Car Heating Co. (The), Erie, Pa.
Gold, Edward E. & Co., Frankfort and Cliff sts., N. Y.
Graydon Safety Car Heating Co. (The), Indianapolis, Ind.
Hurley, Michael B., Quebec, Canada.
Martin Anti-Fire Car Heater Co., Dunkirk, N. Y.; 140 Nassau st., N. Y.
Mason Regulator Co., 22 Central st., Boston, Mass. **22.**
National Pipe Bending Co., New Haven, Conn.
Pennycuick Heat and Ventilation Co., 12 Pearl st., Boston, Mass.
Railway Lighting and Heating Co., 119 S. 4th st., Phila., Pa.
Roblin Safety Car Heater Co., Bay City, Mich.
Safety Car Heating and Lighting Co., 160 B'way, N. Y.; Portland, Me.
Sewall Safety Car Heating Co., Portland, Me.; 120 B'way, N. Y.
Shackleton Car Heating and Ventilating Co., 115 Broadway, N. Y. **85.**
Smith & Owen Heater Co., Detroit, Mich.
Standard Car Heating and Ventilating Co. (The), 708 Penn av., Pittsb'g, Pa.
Struck, Chas. E., 82 Court st., Newark, N. J.
Timlin & Heidinger, Belleville, Ill.
White, T. R., 33 Wellington st., Boston, Mass.
Wilkes, S. Mfg. Co., Monroe and Clinton sts., Chicago, Ill.

Heating Apparatus—Gas.

Maryland Meter and Mfg. Co. (The), 766 B'way, N. Y.

Heating Apparatus—Hot Water.

Bates, Edward P., 59 W. Water st., Syracuse, N. Y.
Butler, W. J., Erie, Pa.
Cook, E. H., Co. (Ltd.), Rochester, N. Y.
Denny Bros. Co., 34 Park pl., N. Y.
Griffing Iron Co., A. A., 449 Comm. av., Jersey City, N. J. **78.**
Gurney Hot Water Heater Co., 237 Franklin st., Boston, Mass.
Hall, A. & Co., 88 Beach st., Boston, Mass.
Hitchings & Co., 233 Mercer st., N. Y.
Hobbs, Gordon & Co., Concord, N. H.
Kelly, J. M. & Co., 608 Nicollet av., Minneapolis, Minn.
Mahony, M., Troy, N. Y.
Pope, Samuel I. & Co., 193 Lake st., Chicago, Ill.
Porter Steam Heating Co., 206 3d st., S. Minneapolis, Minn.
Progressive Iron Works, 251-255 Greenpoint av., B'klyn, E. D., N. Y.
Putnam Foundry and Machine Corporation, Putnam, Conn.
Rill, Whitacre & Co., 42-44 W. Monroe st., Chicago, Ill.
Scollay, John A., 74 Myrtle av., B'klyn, N. Y.
Shackleton Car Heating and Ventilating Co., 115 B'way, N. Y. **85.**
Sharon Boiler Works, Sharon, Pa.
Star Steam Heater Co., Mount Joy, Pa. **57.**
Weathered, Thos. W., 46 Marion st., N. Y.

Heating Apparatus—(Steam).

Aller, A., 109 Liberty st., N. Y.
Am. Meter Co., 223 6th av., N. Y.
Annin & Co., 1 Adams st., B'klyn, N. Y.

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Austin, W. J., Fond-du-Lac, Wis.
Backus, Peter & Son, 135 W. 25th st., N. Y.
Baker Heater Co., 540 W. 33d st., N. Y.
Baker Smith & Co., 79 W. Houston st., N. Y.; 81 Jackson st., Chicago, Ill.
Bannan, F. B., Pottsville, Pa.
Bartlett, Hayward & Co., Pratt and Scott sts., Balt., Md.
Basshor, T. C. & Co., Balt., Md.
Bates, Edward P., 59 W. Water st., Syracuse, N. Y.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Berryman Heater Co., 37 S. Canal st., Chicago, Ill.
Black, Jos. R., 355 W. 40th st., N. Y.
Bonnell, Hayes & Co., 163 E. Van Buren st., Chicago, Ill.
Bonner & Vancourt, 517 W. 45th st., N. Y.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Bramhall, Dean & Co., 264-266 Water st., N. Y.
Broomell & Sands, York, Pa.
Brown, E. L., 234 S. Clark st., Chicago, Ill.
Brown, Rufus E., 26 Charlestown st., Boston, Mass.
Brown & Kavanaugh, 50 S. Franklin st., Chicago, Ill.
Butler, W. J., Erie, Pa.
Canton Steam Heater Co. (The), Canton, O.
Central Falls Steam Heating Co., 351 Mill st., Central Falls, R. I.
Cincinnati Steam Heating Co., 187 W. Pearl st., Cincinnati, O.
Cline Mfg. Co., 42 W. Monroe st., Chicago, Ill.
Clow, James B. & Son, 222 Lake st., Chicago, Ill.
Combination Co., 293 Franklin st., Norwich, Conn.
Cook, E. H. Co. (Ltd.), Rochester, N. Y.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Davis, Isaac B. & Son, Hartford, Conn.
Davis, John & Co., 71 Michigan st., Chicago, Ill.
Demarest, John, 75 Union st., Boston, Mass.
Detroit Heating and Lighting Co., Detroit, Mich.
Detroit Metal and Heating Works, 54 Woodward av., Detroit, Mich.
Detroit Steam Radiator Co., 11 Rowland st., Detroit, Mich.; 35 5th av., Chicago, Ill.
Dry Dock Sheet Metal Works, Guion and Orleans sts., Detroit, Mich.
Duplex Steam Heater Co., 10 Barclay st., N. Y.
Eastern Supply Co., 19 Pearl st., Boston, Mass.
Exeter Machine Works, Exeter, N. H.
Fischer, Wm. G., Cooking and Heating Apparatus Mfg. Co., 25-27 N. 5th st, Cincinnati, O.
Gillis & Geoghegan, 116 Wooster st., N. Y.
Globe Steam Heater Co., North Wales, Pa.
Gold, Edward E. & Co., Bridge Store No. 6, N. Y.
Gordon & Lidgerwood Co., 96 Liberty st., N. Y.
Griffing, A. A. Iron Co., 632 Communipaw av., Jersey City, N. J. **78.**
Harvey, A. & Son, 139 Woodbridge av., Detroit, Mich.
Haxtun Steam Heater Co., Kewanee, Ill.
Hay & Prentice Co., 34 S. Canal st., Chicago, Ill.
Haythorn, Wm., 200 E. Washington st., Chicago, Ill.
Heads Iron Foundry, 105 Broad st., N. Y.
Herendeen Mfg. Co., Geneva, N. Y.
Hitchings & Co., 233 Mercer st., N. Y.
Hobbs, Gordon & Co., Concord, N. H.
Holbrook & Mann Ventilating and Heating Co., 337 Dearborn st., Chicago, Ill.
Hooker, C. K., Cambridgeport, Mass.
Hussey Re-heater and Steam Plant Imp. Co. (The), 15 Cortlandt st., N. Y.
Instantaneous Water Heating Co., 87 Dearborn st., Chicago, Ill.
Jacobs, Theo. & Co., 82 S. Market st., Chicago, Ill
Johnson & Morris, 114 Leonard st., N. Y.
Joy, T. C., Titusville, Pa.
Kelly, J. M. & Co., 608 Nicollet av., Minneapolis, Minn.
Kelly & Jones Co., 141 1st av., Pittsb'gh, Pa.; 75 John st., N. Y.
Kieley, Timothy, 7-11 W. 13th st., N. Y.
Lamb, F. W. & Co., 258 Michigan st., Chicago, Ill.
Leach, Wm., 225 S. Canal st., Chicago, Ill.
Le Bosquet Bros., 75 Union st., Boston, Mass.
McGinness, Smith & Co., 88 Water st., Pittsb'gh, Pa.
Maginn, W. B., 67 Water st., Pittsb'gh, Pa.
Mahony, M., Troy, N. Y.
Morgan, D. T., Akron, O.
Mowry, W. C., Norwich, Conn.
Murray, James & Co., 45 W. Washington st., Chicago, Ill.
Nason Mfg. Co., 71 Beekman st., N. Y.
New Haven Steam Heating Co., 84½ Market st., Chicago, Ill.
N. Y. Central Iron Works, 72 Exchange pl., Geneva, N. Y.
Norcross Furnace Gov. Co., 117 E. Lake st., Chicago, Ill.
Osborne, E. F. & Co., 112 S. Clark st., Chicago, Ill.; St. Paul, Minn.
Page, John W. Mfg. Co. (The), 88 S. Market st., Chicago, Ill.
Page, Samuel I. & Co., 193 E. Lake st., Chicago, Ill.
Page Steam Heating Co., Norwich, Conn.
Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.
Pierce Steam Heating Co., Buffalo, N. Y.
Pope, Samuel I. & Co., 193 Lake st., Chicago, Ill.
Porter Steam Heating Co., 206 3d st., S. Minneapolis, Minn.
Putnam Foundry & Machine Corp., Putnam, Conn.
Rice & Whitacre Mfg. Co., 42 to 44 W. Monroe st, Chicago, Ill.
Richardson & Morgan Co., 92 Beekman st., N. Y.
Roche, J. H., 213 31st st., Chicago, Ill.
Royal Steam Heater Co., Gardner, Mass.
Rundell, Spencer & Co., Milwaukee, Wis.
Shackleton Car Heating & Ventilating Co., 115 B'way, N. Y. **85.**
Sharon Boiler Works, Sharon, Pa.
Shriver, Weatherby & Co., Grand Rapids, Mich.
Silsby Mfg. Co., Seneca Falls, N. Y.
Smith, H. B. Co., 137 Centre st., N. Y.
Somersworth Machine Co., 154 E. Lake st., Chicago, Ill.
Standard Car Heating & Ventilating Co., Penn Bldg., Pittsb'gh, Pa.
Star Steam Heater Co., Market & Main sts., Mt. Joy, Pa.; 77 Maiden la., N. Y. **57.**
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Summerhays, C. K., 226 Pearl st., Buffalo, N. Y.
Trask & Carmichael, 80 Centre st., N. Y.
Victor Heating Co, (The), Norwich, Conn.
Ware, Edmund R., 154 E. Lake st., Chicago, Ill.
Walworth Mfg. Co., 134 Congress st., Boston, Mass.
Webster & Meathe, 71 Shelby st., Detroit, Mich.
Weston Engine Co., Painted Post, N. Y.
Wilkes, S., Mfg. Co., Monroe & Clinton sts., Chicago, Ill.
Winne Steam Heating Co., 232 S. Clark st., Chicago, Ill.
Wood, Wm. E. & Co., 296 W. Baltimore st., Balt., Md.

Heaters for Street Cars.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Cline Mfg. Co., 277-279 S. Canal st., Chicago, Ill.
Clute, Geo. M., West Troy, N. Y.
Gold, Edward E. & Co., Frankfort and Cliff sts., N. Y.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn. N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Milmine H. B. & Co., Toledo, O.
Missouri & Kan. Port Stove & Fuel Co., 219 Market st., St Louis, Mo.
Pennycuick Heat & Ventilation Co., 12 Pearl st., Boston, Mass.
Post & Co., Cincinnati, O.

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Pugh & Russell, Stewart Bldg., N. Y.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Street Ry. Supply Co., Cleveland, O.

Helves—Axe.

Cady, James, Campville, Conn.
Johnson, Wm., Putney, Vt.
Kelsey, Horatio, Clinton, Conn.
Roberts & Slack, Felt's Mills, N. Y.
St. John, A., Burr's Mills, N. Y.
Shipman, E. O., Weston, Conn.
Walker & Hatch Lumber & Mfg. Co., Burlington, Vt.

Hinges - Spring—Double Acting.

Cross, J. E., 115 B'way, N. Y.
Union Brass Mfg. Co., Chicago, Ill.

Hinges—Strap and T.

Gilmore, E. W. & Co., North Easton, Mass.
McKinney Mfg. Co., Ridge av., c. Rebecca st., Allegheny, Pa.
Smith & Egge Mfg. Co. (The), Lafayette, c. Allen st., Bridgeport, Conn.
Stanley Works, New Britain, Conn.
Star Iron Works, Lindsay & McCutcheon sts., Allegheny City, Pa.

Hoisting Apparatus for Vessels—Freight.

American Ship Windlass Co., Providence, R. I. xii.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. 57.
Harrington, E. Son & Co., 15th st., c. Penna. av., Phila., Pa.
McCoy & Sanders, 26 Warren st., N. Y.

Hoof Clasps.

Cruice, Daniel & Co., 1516 B'way, N. Y.

Hooks—Car.

Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Stanwood, G. M. & Co., 261 Commercial st., Portland, Me.
Taylor Iron Works, Highbridge, N. J.

Horse Collar Mfrs. and Dealers.

Aird, J. H., 19 Catherine st., N. Y.
Aird & Dingler, 5 New Bowery, N. Y.
Auburn Collar Co., Auburn, N. Y.
Bach, M. W. & Co., Ottawa, Ill.
Bea, J., 65 Bruen st., Newark, N. J.
Bellis, W. L., 79 Michigan st., Cleveland, O.
Bippert, F., 668 av. A, Buffalo, N. Y.
Burdell, W. Jr., Columbus, O.
Bustin, W. H., 6 N. Anderson st., Boston, Mass.
Callahan, W. 96 Champlain st., Cleveland, O.
Carrick, D. S. & Co., 141 Main st., Cincinnati, O.
Chamberlain Bros., Council Bluffs, Ia.
Cincinnati Saddlery Co., 104 Main st., Cincinnati, Ohio.
Cogan, Joseph, 55 Sudbury st., Boston, Mass.
Collins, Baily & Co., 10 Peck sl., N. Y.
Conwell, J., 218 N. 3d st., Phila., Pa.
Corcoran & Schaefer, Ottawa, Ill.
Cosbie, W., 516-518 Mission st., San Francisco, Cal.
Crouch, Geo. W., 245 Race st., Phila., Pa.
Curd & Sinton Mfg. Co., 518 W. Main st., Louisville, Ky.
Curme, Dunn & Co., Richmond, Ind.
Curtis, M. C., 407-418 B'way, Troy, N. Y.
Davis, W., 410 Market st., San Francisco, Cal.
Dayton Leather & Collar Co., Dayton, O.
DeCamp, Levoy & Co., 91-93 Main st., Cincinnati, Ohio.
Decker, W. F., 55 W. Kinney st., Newark, N. J.
Dengler, P., 1301 Russell av., St. Louis, Mo.
Dingler, Henry, 140 Chambers st., N. Y.
Dippert, W., Des Moines, Ia.
Dobbins, L. H., Salem, O.
Dunavan & Son, Dayton, Ill.
Dusenbury, H. G., 43 Duane st., N. Y.
Duxon, H., 43 Duane st., N. Y.
Engelke, J., 376 Main st., Cincinnati, O.
Feldkamp, H., 1013 Shelby st., Louisville, Ky.
Fischbeck, D. & Son, Milwaukee, Wis.
Flesch, S. & Sons, 308 E. Green st., Louisville, Ky.
Foglesang & Wogaman, Dayton, O.
Forgie, J. & Son, 8 Merchants' row, Boston, Mass.
Fox River Horse Collar Mfg. Co., Dayton, Ill.
Fraser, J. & Co., 57 Terrace st., Buffalo, N. Y.
Frear, W. H., Troy Bazaar, Troy, N. Y.
Frederick, H. N., Peoria, Ill.
Gould, W. J., 709 Christy av., St. Louis, Mo.
Graf, Morsbach & Co., 214 Main st., Cincinnati, Ohio.
Grossman, Gouvion & Co., 74 Main st., Cincinnati, O.
Haas, I., Dayton, O.
Hadnall, M., Richmond, Va.
Haggerty, Patrick, H., r. 90 Roosevelt st., N. Y.
Harbison & Carthright, 705 W. Main st., Louisville, Ky.
Harkins, W. S., Lancaster, Pa.
Hayden, P., 104 Woodward av., Detroit, Mich.
Hayden, P. & Co., 45 Lake st., Chicago, Ill.
Hess & Hopkins Leather Co., Rockford, Ill.
Hoover, W. H., New Berlin, O.
Howe, E. A., Ludlow, Vt.
Irvine, S. T., Springfield, O.
James, W., 230 Cambridge st., Boston, Mass.
Johnson, J. G. & Co., 12 Pine st., San Francisco, Cal.
Johnson, W., 151 E. 23d st., N. Y.
Johnson, Wm., 120 W. 25th st., N. Y.
Kelly & Callan, 419 Pearl st., N. Y.
Kiehl, M., 148 N. 3d st., Phila., Pa.
Kohrmann, A., Park av., c. 12th st., St. Louis, Mo.
Kotnour & Horeisch, St. Paul, Minn.
Krupp, J., Indianapolis, Ind.
Langenbrunner & Co., 99 Hammond st., Cincinnati, O.
Larkin Bros., 287 7th av., N. Y.
Larkin, John., 20 Harrison st., N. Y.
Leacock & Stevenson, 527 W. 46th st., N. Y.
Leggett, H., Syracuse, N. Y.
Lighthouse, C. F., 35 N. Water st., Rochester, N. Y.
Lighthouse, J. C., 208 State st., Rochester, N. Y.
Loeblein, B., 819 N. 19th st., St. Louis, Mo.
Lowell, J. W., Lancaster, Pa.
McCarthy, John & Sons, 609 1st av., N. Y.
McClain, E. L., Mfg. Co., Greenfield, O.
McNamara, M. J., 400 Pearl st., N. Y.
Main & Winchester, 214 Battery st., San Francisco, Cal.
Malcho, J., 71 Macomb st., Detroit, Mich.
Martin, John L., 2 Abingdon sq., N. Y.
Mayer & Christian, 308 E. Green st., Louisville, Ky.
Mingey, Walter, 114 W. 39th st., N. Y.
Mitchell, W. S., Dayton, O.
Moore, Thomas, 278 Pearl st., N. Y.
Mullen, J., 130 Dorrance st., Providence, R. I.
Nelson, N. S. & Co., Lawrence, Kan.
Newhall, G. N. & Co., Worcester, Mass.
N. Y. Horse Collar Co., 19 Peck sl., N. Y.
O'Callaghan, Timothy, 202 E. 84th st., N. Y.
O'Kane, J., 769 Market st., San Francisco, Cal.
O'Sullivan, J., 57 Gold st., N. Y.
Page, G. B. & Son, 187 E. Main st., Rochester, N. Y.
Peeters Bros., 195 Front st., Rochester, N. Y.
Peters & Calhoun Co., 906 Broad st., Newark, N. J.
Porter Bros. & Hackworth, Ottumwa, Ia.
Potter, C. M., 11 Washington st., Providence, R. I.
Quinn, J. E., Toledo, O.
Racine, A., Fort Wayne, Ind.
Reis, S. & Co., 1112d st., Louisville, Ky.
Reitz, W., 120 Pitt st., N. Y.
Rix, Frederick, 722 Canal st., Chicago, Ill.
Rublemann & Co., Des Moines, Iowa.
Ruth, D., 142 N. 3d st., Phila., Pa.

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Rutherford, A., 206 N. Front st., Phila., Pa.
Ryan, John, 259 William st., N. Y.
Schad, A. E., Madison, Ind.
Scheiperpeter, B., 1415 Farrar st., St. Louis, Mo.
Schmidt, Frederick, 1114-1116 Lafayette av., St. Louis, Mo.
Schmitz, J. P., Winona, Minn.
Smith, Bourne & Co., Hartford, Conn.
Sommers Bros., 3516 N. 11th st., St. Louis, Mo.
Stanley Horse Collar Co., 195 Halsey st., Newark, N. J.
Steel Horse Collar Co., 2426 Washington av., Phila., Pa.
Stewart & Flaherty, 741 S. 10th st., Phila., Pa.
Strauss, J. & Co., Jefferson, Mo.
Thompson, A. B., Ottawa, Ill.
Thompson, J., Syracuse, N. Y.
Tiffany, W. W., Des Moines, Ia.
Van Nostrand, W. H., Muscatine, Ia.
Walter & Ambruster, 9 N. Commercial st., St. Louis, Mo.
Wentz, C. H., South Charleston, O.
Wettersbach, C., Leavenworth, Kan.
Winne & Drake, 221 River st., Troy, N. Y.
Winters, R. C., 20 Lawrence st., Newark, N. J.
Wiseman, R. W., Worcester, Mass.
Wright, J., Richmond, Va.

Horse Shoe Mfrs.

Albany & Rennselaer Iron & Steel Co., Madison, c. 1st st., Troy, N. Y.
Am. Horse Shoe Co., 3d, c. Lock st., Cincinnati, O.
Arcade Malleable Iron Co., Worcester, Mass.
Barnard, E., Rome, N. Y.
Belknap, W. B. & Co., 115 W. Main st., Louisville, Ky.
Bellamy Horse Shoe Co., 140 Nassau st., N. Y.
Bingham Sectional Horse Shoe Co. (The), Gold, E. Water st., Bridgeport, Conn.
Bonesteel, C. H., 55 King st., Troy, N. Y.
Bridgewater Iron Co., 28 Broad st., Boston, Mass.
Bryden Forged Horse Shoe Works, Catasauqua, Pa.
Burden Iron Co., Troy, N. Y.
Claffy, John, 48 Dey st., N. Y. **91.**
Coleman & Reynolds, 44 E. 6th st., Cincinnati, O.
Crie, H. H. & Co., Rockland, Me.
Diamond State Iron Co., Wilmington, Del.
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
Dryden Forged Horse Shoe Works (Ltd.), Catasauqua, Pa
Gourdier, Henry, 1584 B'way, N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Improved Horse Shoe Co., 16 Exchange pl., N. Y.
Juniata Iron and Steel Works (Shoenberger & Co.), Pittsb'g, Pa.
Kannolt, A., Dubuque, Ia.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Never Slip Horse Shoe Co., 36 India whf., Boston, Mass.; 73 Jackson st., Chicago, Ill.
North Chicago Rolling Mill Co., 17 Metropolitan Blk., Chicago, Ill.; 151 Insurance Blk., Milwaukee, Wis.
Ohio Valley Mfg. Co., Covington, Ky.
Old Dominion Iron and Nail Works Co., Richmond, Va.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Phœnix Horse Shoe Co., Poughkeepsie, N. Y.; 20 Reade st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
R. I. Horse Shoe Co., 31 Exchange pl., Providence, R. I.
Russell, C. W., 158 E. 25th st., N. Y.
Shoenberger & Co., 15th, c. Etna st., Pittsburgh, Pa.
Sommars, C., Boone, Ia.
Spring Horse Shoe Co., Derby, Conn.
Syracuse Iron Works, Syracuse, N. Y.
Todd-Donigan Iron Co., 321 W. Main st., Louisville, Ky.
Tredegar Iron Works, Tredegar Co., Richmond, Va.
United Horse Shoe and Nail Co., 115 Cannon st., E. C., London, Eng.
Vandegrift Expanding Horse Shoe Co., Wilmington, Del.
Vought & Williams, 194 West st., N. Y.
Walker Horse Shoe Co., 67 German st., Balt., Md.
Watts, H. L., St. Peter, Minn.
Western Steel Co., 58 Dearborn st., Chicago, Ill.

Horse Shoe Pads.

Lockie Horse Shoe Pad Co., 21 3d av., Chicago, Ill.
McClain, E. C., Cincinnati, O.

Hose--Air Brake.

Akron Rubber Co., Akron, O.
Boston Belting Co., 260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Gutta Percha & Rubber Mfg. Co., 159 Lake st. Chicago, Ill.
Hamilton Rubber Co., Trenton, N. J.
Home Rubber Co., Trenton, N. J.
Hoole Mfg. Co., 46 Bond st., N. Y.
Mercer Rubber Co., Trenton, N. J.
N. Y. Belting & Packing Co., 15 Park row, N. Y. **v.**
Revere Rubber Co., 66 Franklin st., Boston, Mass.; 64 Reade st., N. Y.
Trenton Rubber Co., Trenton, N. J.

Hose Carriages.

Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Jacobs, E. H. & Co., Danielsonville, Conn.

Hose--Cotton.

American Multiple Fabric Co., Olneyville, R. I.
Bay State Co., 156 Devonshire st., Boston, Mass.
Boston Belting Co., 222 to 226 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire, st., Boston, Mass.
Childs, H. L. & Co., 8 Smithfield st., Pittsb'gh, Pa.
C. & P. & Nickel Plate R. R., Cleveland, O.
Cleveland Rubber Co., Cleveland, O.; C. & P. & Nickel Plate R. R.
Conant Rubber Co., 26 & 28 Asylum st., Hartford, Conn.
Eureka Fire Hose Co., 13 Barclay st., N. Y.
Fabric Fire Hose Co., 5 Barclay st., N. Y.
Gates, Josiah & Sons, Lowell, Mass.
Gutta Percha & Rubber Mfg. Co. (The), c. Warren & Church sts., N. Y.; 159 Lake st., Chicago, Ill.
Manhattan Awning & Cover Factory, 250 3d av., N. Y.
N. Y. Belting & Packing Co., 15 Park row, N. Y. **v.**
Russell Mfg. Co., Middletown, Conn.

Hose--Fire.

Allen Fire Department Supply Co., Eddy, c. Friendship st., Providence, R. I.
American Fire Hose Mfg. Co., 12 Temple pl., Boston, Mass.
American Fire Hose Mfg. Co., Chelsea, Mass.; 152 E. Lake st., Chicago, Ill
Bauch, Erdman, Kittredge, c. Beach st., Boston, Mass.
Bickford & Francis, Buffalo, N. Y.
Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 220 & 222 E. Lake st., Chicago, Ill.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Childs, H. L. & C., 8 Smithfield st., Pittsburgh, Pa.
Combination Roll & Rubber Co., 38 Park row, N. Y.

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Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Eberle, G. A., 32 Hawley st., Boston, Mass.
Eureka Fire Hose Co., 13 Barclay st., N. Y.
Fabric Fire Hose Co., 5 Barclay st., N. Y.; 139 E. Lake st., Chicago, Ill.
Goodrich Co., The B. F., Akron, O.
Gutta Percha & Rubber Mfg. Co., cor. Warren and Church sts., N. Y.
Hawley, G. A., 32 Hawley st., Boston, Mass.
Home Rubber Co., Trenton, N. J.
Jacobs, E. H. & Co., Danielsonville, Conn.
Leonard & McCoy, 118 Liberty st., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Mercer Rubber Co., Trenton, N. J.
Morse, Andrew J. & Son, 138 Congress st., Boston, Mass.
New England Fire Hose Mfg. Co., 53 Lincoln st., Boston, Mass.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**
Revere Rubber Co., 63 Franklin st., Boston, Mass.
Silsby Mfg. Co., Seneca Falls, N. Y.
Trenton Rubber Co., Trenton, N. J.

Hose—Leather.

Am. Oak Leather Co., 2d, c. Walnut st., Cincinnati, O.
Buffalo Belting Works, 14-24 Wells st., Buffalo, N. Y.
Cross Bros. & Co., Rochester, N. Y.
Gates, Josiah & Sons, Lowell, Mass.
Home Rubber Co., Trenton, N. J.
Horton, H. P., Balt., Md.
Rainville, F. & Co., Grand Rapids, Mich.

Hose—Linen.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Eberle, G. A., 32 Hawley st., Boston, Mass.
Eureka Fire Hose Co., 13 Barclay st., N. Y.
Mineralized Rubber Co., 18 Cliff st., N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**
Russell Mfg. Co., Middletown, Conn.
Waunalauset Co., Malden, Mass.

Hose—Locomotive.

Akron Rubber Co., Akron, O.
Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Combination Roll and Rubber Co., 62 Astor House, N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Home Rubber Co., Trenton, N. J.
Hoole Mfg. Co., 46 Bond st., N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**
Revere Rubber Co., 63 Franklin st,, Boston, Mass.
Trenton Rubber Co., Trenton, N. J.

Hose Manufacturers.

Allen, M. D. & Co., 151 E. Lake st., Chicago, Ill.
Allen, W. R. & Co., 327 Market st., San Francisco, Cal.
American Multiple Fabric Co., Olneyville, R. I.
Bailey, Farrell & Co., 619 Smithfield st., Pittsb'g, Pa.
Barr, G. D., Buffalo, N. Y.
Bickford & Francis, 53-55 Exchange pl., Buffalo, N. Y.
Bodifeld & Co., 8 S. Water st., Cleveland, O.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.; Cambridgeport, Mass.; 220-222 Lake st., Chicago, Ill.
Braman, Dow & Co., 5 Haymarket st., Boston, Mass.
Burgess, A. & Son, 692 N. Main st., Providence, R. I.
Callahan, C. & Co., 164 High st., Boston, Mass.
Chestnut, D. & Co., 147 1st av., Pittsb'gh, Pa.
Childs, H. L. & Co, 8 Smithfield st, Pittsb'gh, Pa.
Clapp, C. M. & Co., 183 Devonshire st., Boston, Mass.
Cullom, H. C., Joliet, Ill.
Custer Beam Works, Marshall and Diamond sts., Phila., Pa.
Demets, L., 81 New st., N. Y.
Dudgeon, J. W., 92 1st av., Pittsb'g, Pa.
Dunbar, G. & Co., 76 Pearl st., Boston, Mass.
Eastman, S. & Co., Concord, N. H.
Eberle, L. A., 32 Hawley st., Boston, Mass.
Fuller, Dana & Fitz, 110 North st., Boston, Mass.
Gates, Josiah & Sons, Dutton, c. Market st., Lowell, Mass.
Godson, T. & Son, 274 River st., Troy, N. Y.
Goodrich, B. F. Co. (The), Akron, O.
Goodrich, B. F. & Co., 83 Chambers st., N. Y.
Guibert, J. C. N., 13 Barclay st., N. Y.
Gump, C. A. & Co., Dayton, O.
Greene, Tweed & Co., 83 Chambers st., N. Y.
Gregory, H. P. & Co., 2 California st., San Francisco, Cal.
Hall, E. R. & Co., 305 N. 4th st, St. Louis, Mo.
Hartley Bros., 400 Smithfield st., Pittsburgh, Pa.
Herkner H. F., 15 Park Row, N. Y.
Hitchins, G. M., & Co., 710 B'way, N. Y.
Hoffeld, R. & Co., 14 Wells st., Buffalo, N. Y.
Hunt, Henry C. & Co., 45 Arch st., Boston, Mass.
Jacobs, E. H. & Co., Danielsonville, Conn.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Kendall & Lyon, 65 Walnut st., Cincinnati, O.
Kidder, Samuel, 60 Federal st., Boston, Mass.
Klock, D., Jr., 10 B'way, Troy, N. Y.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Leister, S. A., Tiffin, O.
Leonard & McCoy, 118 Liberty st., N. Y.
Le Roy Pine Co., J. (The), 550-552 Fulton st., Troy, N. Y.
Logan, Gregg & Co., 306 Wood st., Pittsburgh, Pa.
McNish, A. M. & Son, 516 Liberty st., Pittsb'gh, Pa.
O'Neal & Price Co. (The), 124 W. 2d st., Cincinnati, O.
Parke & Lacy, 21 Fremont st., San Francisco, Cal.
Peck & Bemis, 176 Superior st., Cleveland, O.
Phillips, J. & H., 26 6th st., Pittsburgh, Pa.
Preston, E. B. & Co., 413-417 5th av., Chicago, Ill.
Putnam, Geo. D. & Co., 127 Milk st, Boston, Mass.
Rhoads & McComb, 1223 Carson st., Pittsburgh, Pa.
Roberts, Geo. W. & Co., 144 E. Lake st., Chicago, Ill.
Ross, Turner & Co., 31 Otis st., Boston, Mass.
Royer, H., 855 Bryant st., San Francisco, Cal.
Russell Mfg. Co., Middleton, Conn.
Salisbury & Cline, 109 Madison st., Chicago, Ill.
Sawyer, H. S., Colebrook River, Conn.
Schenck, W. T. Y., 36 California st., San Francisco, Cal.
Selby, T. H. & Co., 116 California st., San Francisco, Cal.
Sothern, Jno. S., 232 West st., N. Y.
Turner, Chas. A., 14 Market st., Pittsburgh, Pa.
Whelpley, R. T., 141 Lake st., Chicago, Ill.
Woodin & Little, 509 Market st., San Francisco, Cal.

Hose—Rubber.

Akron Rubber Co., Akron, O.
Atlanta, Rubber Co., 16 Decatur st., Atlanta, Ga.
Atwood & McCaffrey, 50 3d av., Pittsburgh, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Bay State Belting Co., 156 Devonshire st., Boston, Mass.

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Boston Belting Co., 100 Chambers st., N. Y.; 260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Brook, Jas. F. Co. (The), Trenton, N. J.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Buckley, John W., 156 South st., N. Y.
Buffalo Rubber Co., 204-206 Main st., Buffalo, N. Y.
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Chestnut, D. & Co., 147 1st av., Pittsburgh, Pa.
Chesterson, A. W. & Co., 49 India st., Boston, Mass.
Chicago Rubber Works, 230 E. Randolph st., Chicago, Ill.
Childs, H. L. & Co., 8 Smithfield st., Pittsburgh, Pa.
Cleveland Rubber Co., C. & P. & Nickel Plate R. R., Cleveland, O.
Combination Roll & Rubber Co., 38 Park Row, N. Y.
Commercial Rubber Co. (The), 132 Nassau st., N. Y.
Donaldson, J. P. & Co., Detroit, Mich.
Eaton, Cole & Burnham Co., 82-84 Fulton st., N. Y.
Eberle, G. A., 32 Hawley st., Boston, Mass.
Empire Rubber Co., Trenton, N. J.
Erie Rubber Co., Erie, Pa.
Fabric Fire Hose Co., 5 Barclay st., N. Y.
Globe Rubber Co., Trenton, N. J.
Goodyear's India Rubber & Glove Mfg. Co., 503 & 505 B'way, N. Y.; 242 Main st., Buffalo, N. Y.; 577 Market st., San Francisco, Cal.
Greene, Tweed & Co., 83 Chambers st., N. Y.
Gutta Percha & Rubber Mfg. Co., 35 Warren, c. Church st., N. Y.; 159-161 E. Lake st., Chicago, Ill.; 501 Market st., San Francisco, Cal.
Hamilton Rubber Co., Trenton, N. J.; 131 Lake st., Chicago, Ill.
Home Rubber Co., Trenton, N. J.
James, C. E. & Co., 103 E. 8th st., Chattanooga, Tenn.
Kay Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Morse, Andrew J. & Son, 140 Congress st., Boston, Mass.
National Rubber Co., Bristol, R. I.
New Jersey Car Spring & Rubber Co., Wayne, c. Brunswick st., Jersey City, N. J.
N. Y. Belt & Packing Co., 15 Park Pow N. Y. **v.**
N. Y. Rubber Co., 170 Church st., N. Y.
Ohio Belting & Supply Co., Cleveland, O.
O'Neal & Price Co. (The), 124 W. 2d st., Cincinnati, O.
Phœnix Packing & Rubber Co., 108 Liberty st., N. Y.
Price, Wm. G. & Co., 15 Wood st., Pittsb'gh, Pa.
Revere Rubber Co., 63 Franklin st., Boston, Mass.; 64 Reade st., N. Y.
Sharp, Joseph, 59 Walnut st., Cincinnati, O.
Silsby Mfg. Co., Seneca Falls, N. Y.
Star Rubber Co., Trenton, N. J.
Town & Bro., 712 Market st., Phila., Pa.
Trenton Rubber Co., Trenton, N. J.
Troy Belting & Supply Co., 550 Fulton st., Troy, N. Y.
Whitehead Bros., Trenton, N. J.

*Hose—Rubber Test.

N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**

Hose—Rubber, Wire Covered.

Mercer Rubber Co., P. O. Drawer Z, Trenton, N. J.

Hose—Steam.

Akron Rubber Co., Akron, O.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Mercer Rubber Co., P. O. Drawer Z, Trenton, N. J.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**
Revere Rubber Co., 63 Franklin st., Boston, Mass.

Hose—Suction.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Combinaton Roll & Rubber Co., 38 Park Row, N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Fabric Fire Hose Co., 1 and 1½ Barclay st., N. Y.
Home Rubber Co., Trenton, N. J.
N. Y. Belting and Packing Co., 15 Park Row, N. Y. **v.**
Revere Rubber Co., 63 Franklin st., Boston, Mass.
Trenton Rubber Co., Trenton, N. J.

Hot Blast Apparatus.

Boston Blower Co., 276 Franklin st., Boston, Mass.
Huyett & Smith Mfg. Co., 1403 Russell st., Detroit, Mich.

Hydrants.

Alexander & Park, Detroit, Mich.
Bailey & Farrell, 619 Smithfield st., Pittsburgh, Pa.
Baldwin, F. A., 28 Marion st., N. Y.
Blessing, C. A., Montgomery av. and 6th st., Phila., Pa.
Boston Machine Mfg. Co., Granite, c. 1st st., S. Boston, Mass.
Chapman Valve Mfg. Co., 72 Kilby st., Boston, Mass.
Clark, L. P. & Sons, Balt., Md.
Douglas, W. & B., 76 William st., Middletown, Conn.
Drummond, M. J., 95 Liberty st., N. Y.
Eddy Valve Co., Waterford, N. Y.
Fieldhouse & Dutcher Mfg. Co., 32 W. Monroe st., Chicago, Ill.
Holyoke Hydrant and Iron Works, Holyoke, Mass.
Hotchkiss, Guy C., Field & Co., 624 E. 14th st., N. Y.
Jonson Foundry and Machine Co., ft. 118th st., Harlem River, N. Y.
Keegan, J. D., 134 W. 30th st., N. Y.
Ludlow Valve Mfg. Co., 938-954 River st., Troy, N. Y.
McLean, John, 298 Monroe st., N, Y.
McNeil, John, 8th and Walnut sts., Cincinnati, Ohio.
Mayor, Lane & Co., 119 Walker st., N. Y.
Murdock, J. G. & Co., 195 W. 5th st., Cincinnati, Ohio.
Progressive Iron Works, 255 Greenpoint av., B'klyn, N. Y.
Shriver, Weatherly & Co., Grand Rapids, Mich.
Stacy, S. A. & Co., 102 Central av., Cincinnati, O.
Stone, Fred. & Co., 62 Gold st., N. Y.
Union Hydraulic Works, Phila., Pa.
United States Pump and Valve Co., 26-28 Oliver st., Boston, Mass.
Warden, McClellan & Co., 25 B'way, Cincinnati, Ohio.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.
Wood & Co., R. D., 400 Chestnut st., Phila., Pa.

*Hub Bands.

Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**

*Incrustation in Boilers Prevented.

Lord, G. W., 316 Union st., Phila., Pa. **81.**

Indicators—Car.

Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Standard Index & Register Co., 138 Fulton st., N. Y.

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* Indicators—Chain.

American Ship Windlass Co., Providence, R. I. **xii.**

Indicators—Electric.

Shaw, Thomas, 915 Ridge av., Phila., Pa.

Indicators—Low Water.

Kessler, W. J., B'klyn, N. Y.
Love, J. N., 44 Bd. of Trade, Chicago, Ill.
Van Duzen & Tift, 102 E. 2d st., Cincinnati, O. **57.**

Indicators—Revolution.

Brown, Edward, 311 Walnut st., Phila., Pa.

Indicators—Steam.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashcroft Mfg. Co., 111 Liberty st., N. Y.
Crosby Steam Gauge & Valve Co., 95 Oliver st., Boston, Mass.
Hoppe, Paul F., 107 Liberty st., N. Y.

Indurated Fibre.

Union Indurated Fibre Co., 37 Barclay st., N.Y.

Injectors.

Aller, Amos, 109 Liberty st., N. Y.
American Injector Co., 175 Larned st., W., Detroit, Mich.
Andres, H., 22 N. 4th st., Phila., Pa.
Appleton, Arthur, 45 Cortlandt st., N. Y.
Ashcroft Mfg. Co., 111 Liberty st., N. Y.
Atwood & McCaffrey, 50 3d av., Pittsburgh, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Beggs, Jas. & Co., 9 Dey st., N. Y.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Brown & King, 62 S Broad st., Atlanta, Ga.
Cadman, A. W. & Co., 63 Water st., Pittsburgh, Pa.
Cook & Co., 22 Cortlandt st., N. Y.
Donnegan & Swift, 174 Fulton st., N. Y.
Eclipse Injector & Lubricator Co., 604 S. Delaware av. Phila., Pa.
Forest City Brass Works, 40 Leonard st., Cleveland, O.
Fulton & Co., 91 1st av., Pittsburgh, Pa.
Garfield Injector Co., Wadsworth, Ohio.
Hall's Engineering Co., 112 John st., N.Y.
Hancock Inspirator Co., 111 Liberty st., N. Y.
Hoffman, C. N., 511 N. 12th st., Phila., Pa.
Jarvis Engineering Co., 61 Oliver st., Boston, Mass.
Jenks, James & Co., 48 Randolph st., Detroit, Mich.
Kay Bros. & Co., 121 Water st., Pittsb'gh, Pa.
Lathrop & Co., 82 John st., N. Y.
Leroy Pine Co. (The), 550-554 Fulton st., N. Y.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Little, G. H., Peabody, Mass.
Lockyear, G. H., Minneapolis, Minn.
Lonergen, J. E. & Co., 211 Race st., Phila., Pa.
Lynde, Joseph D., 1 Fetter's la., Phila., Pa.
McLaughlin, Geo. G., Mfg. Co., 49 Haverhill st., Boston, Mass.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Minneapolis Tubular Well Co., 224 Washington av., n. Minneapolis, Minn.
Nathan Mfg. Co., 92 Liberty st., N. Y.
National Tube Works Co., Boston, Mass.; 104 John st., N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Penberthy Injector Co., Abbott & 7th sts., Detroit, Mich.
Perkins Machinery Co., Atlanta, Ga.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsb'gh, Pa.
Rue Mfg. Co., 116 N. 9th st., Phila., Pa.
Schaffer & Budenberg, 40 John st., N. Y.
Sellers, Wm. & Co. (Inc.), 1600 Hamilton st., Phila., Pa.
Sherriff, J. B. & Co., 70 Water st., Pittsb'gh, Pa.
Stannard & Dillon, 86 Market st., Chicago, Ill.
Stephens Roe Mfg. Co., 144 Woodward av., Detroit, Mich.
Tifft, George W. Son & Co., Buffalo, N. Y.
Tracey, E., 513 N. 12th st., Phila., Pa.
Urquhart, John S., 46 Cortlandt st., N, Y.
Watson, N. A., Erie, Pa.
Watson & McDaniel, 248 N, 8th st., Phila., Pa.
Watson & Zahniser, Sandy Lake, Pa.
Whiting Mfg. Co., Cedar Rapids, Ia.
W. T. M. Injector Co., 133 Oliver st., Boston, Mass.
Worcester, Francis, 108 5th av., Chicago, Ill.

Inspectors—Boiler.

American Steam Boiler Inspection Co., 120 B'way, N. Y.
Hartford Steam Boiler Inspection and Insurance Co., 218 Main st., Hartford, Conn.

Inspectors—Rail.

Hunt & Clapp, 95 5th av., Pittsb'g, Pa. **72.**
Ward, Frank & Bro., Bissell Blk., Pittsb'gh, Pa.

Inspectors—Railroad Material.

Bussell, Chas. E., 312 S. Barstow st., Eau Claire, Wis. **47.**
Hunt & Clapp, 95 5th av., Pittsb'gh, Pa. **72.**
Mansfield, A. K. & Co., 280 B'way. N. Y.
Twist, Charles H., 1 B'way, N. Y.

Inspirators.

Brown & King, 62 S. Broad st., Atlanta, Ga.
Fairbanks, Morse & Co., Chicago, Ill.
Fairbanks & Co., 311 B'way, N. Y.
Fitchburg Steam Engine Co., Fitchburg, Mass.
Frick & Co., Waynesboro, Pa.
Hancock Inspirator Co., 33 India Wharf, Boston, Mass.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Packard, O, L., Milwaukee, Wis.
Perkins Machinery Co., Atlanta, Ga.

Insulating Material.

Bishop Gutta Percha Co., 420 E. 25th st., N. Y.
Butler Hard Rubber Co., 33 Mercer st., N. Y.
Leatheroid Novelty Co., 74 Bedford st., Boston, Mass.
Standard Paint Co., 59 Maiden la., N. Y.
Vulcanized Fiber Co., Wilmington, Del.; 14 Dey st., N. Y. **96.**

Insulators—Electric.

Butler, Jay C. & Co., 49 Water st., Sandusky, O.
Jones, C. E. & Bro., 55 Longworth st., Cincinnati, Ohio. **78.**
Steward, D. M. Mfg. Co., Chattanooga, Tenn. **80.**
Vulcanized Fibre Co., Wilmington, Del.; 14 Dey st., N. Y. **96.**

Insulators—Electric Glass.

Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.

Insulators—Electric Porcelain.

Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Electrical Supply Co., 171 Randolph st., Chicago, Ill.
Empire China Works, 144 Green st., Greenpoint, N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Union Porcelain Works, 300 Eckford st., Greenpoint, N. Y.

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Insurance—Boiler.

American Steam Boiler Insurance Co., Equitable Bldg., N. Y.
Hartford Steam Boiler Inspection and Ins. Co., Hartford, Conn.

*Insurance—Railroad.

Satterlee, Bostwick & Martin, 58 Cedar st., N. Y.

Iron Angle Splices.

Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.

Iron Angles.

Allegheny, Monongahela and Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
Allentown Rolling Mills, 237 S. 3d st., Phila.; Pa.; Allentown, Pa.
Althouse, S. B. & Co., 101-103 Thompson st., N. Y.
Bethlehem Iron Co., Bethlehem, Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carnegie Bros. & Co. (Ltd.), 48 5th av., Pittsb'g, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Catasauqua Mfg. Co., Catasauqua, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Cumberland Rolling Mill, Mount Clare, Balt., Md.
Dimond, J. G. & T., 209-211 W. 33d st., N. Y.
Elmira Iron and Steel Rolling Mill Co., Elmira, N. Y.
Ewald Iron Co., St. Louis, Mo.
Franconia Iron and Steel Works, Wareham, Mass.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Greenridge Iron Works (A. L. Spencer), Scranton, Pa.
Helmbacher Forge and Rolling Mill Co., St. Louis, Mo.
Hollidaysburg Iron and Nail Co., Hollidaysburg, Pa.
Kensington Iron and Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Laclede Rolling Mills, Chouteau, Harrison & Valle Iron Co., 204 N. 3d st., St. Louis, Mo.
Licking Iron Works, Licking Rolling Mill Co., Covington, Ky.
Little Schuylkill Rolling Mill, Port Chester, Pa.
Lloyd, H., Sons & Co., Pittsburgh, Pa.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Mahoning Valley Iron Co., Youngstown, O.
Maumee Rolling Mill Co., Toledo, O.
Mitchell, Tranter & Co., 2d and Elm sts., Cincinnati, O.
New Albany Rail Mill Co., New Albany, Ind.
N. J. Steel and Iron Co., Trenton, N. J.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Passaic Rolling Mills, Paterson, N. J.; 45 B'way, N. Y.
Pencoyd Iron Works, 261 S. 4th st., Phila., Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pollock, Alex., 212 West st., N. Y. 32.
Portage Iron Co. (Ltd.), Duncansville, Pa.
Pottsville Rolling Mills (Pottsville Iron & Steel Co.), Pottsville, Pa.
Roberts, A. & P. & Co., 261 S. 4th st., Phila., Pa.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.
Stroud & Co., 104 John st., N. Y.
Swift's Iron & Steel Works, Newport, Ky.
Tidewater Steel Works (Combination Steel & Iron Co.), Chester, Pa.
Trenton Iron Works (New Jersey Steel & Iron Co.), Trenton, N. J.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.
Union Rolling Mill Co., 122 Water st., Cleveland, O.

Iron—Arch Bars.

Pittsburgh Forge & Iron Co., Pittsb'gh, Pa.

Iron—Architectural and Structural.

Adams, S. & Son, Rome, N. Y.
Ætna Iron & Steel Works, 161 La Salle st., Chicago, Ill
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
Armstrong Bros., Springfield, O.
Atlanta Bridge & Axle Co., Atlanta, Ga.
Atlantic Iron Works, 704 E. 12th st., N. Y.
Bakewell & Mullins, Salem, O.
Bartlett, Hayward & Co. (Pratt & Scott), Balt., Md.
Berlin Iron Bridge Co., East Berlin, Conn.; Binghamton, N. Y.
Birmingham Bridge Co., Birmingham, Ala.
Bolles, J. E. & Co., 80-84 W. Woodbridge st., Detroit, Mich.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Brooks, T. H. & Co., 708-712 Lake st., Cleveland, O.
Brown, Owens & Taylor, 12th & Buttonwood sts., Phila., Pa.
Burnet & Co., 706 E. 12th st., N. Y.
Campbell, A. J., 553 W. 23d st., N. Y.
Carnegie Bros & Co. (Ltd.), 48 5th av., Pittsb'gh, Pa.
Carr & Smith, Camden, N. J.
Carroll, D. W. C. & Co., 310 Liberty st., Pittsburgh, Pa.
Cartter, M. S. & Co., B'way & Locust sts., St. Louis, Mo.
Chambers & Macbeth, Cleveland, O.
Champion Iron Fence Co., Kinton, O.
Chelmsford Foundry Co., 131 Portland st., Boston, Mass.
Cheney & Hewlett, 201 B'way, N. Y.
Chicago Forge & Bolt Co., 234 Clark st., Chicago, Ill.
Clinton Rolling Mills (Graff, Bennett & Co.), Pittsburgh, Pa.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Cornell, J. B. & J. M., 141 Centre st., N. Y.
Creswell, Samuel J., 23d & Cherry sts., Phila., Pa.
Delamater Iron Works, 21 Cortlandt st., N. Y.
Detroit Bridge & Iron Works, Detroit, Mich.
Dimond, J. G. & T., 209 W. 33d st., N. Y.
Dinsmore & Kastendike, 44 S. Howard st., Balt., Md.
Dominion Bridge Co. (Ltd.), Lachine, P. Q., and Toronto, Ont.
Eagle Iron Works, Wilkesbarre, Pa.
Eclipse Iron Works, Centre, c. Winslow st., Cleveland, O.
Edge Moore Iron Co., 1600 Hamilton st., Phila., Pa.
Enterprise Architectural Iron Works, 8th st. & Park av., St. Louis, Mo.
Essex Iron Works, 53-57 N. J. R. R. av., Newark, N. J.
Evans, Wm. S., Jr., & Bro., South av. & Walker st., Allegheny, Pa.
Excelsior Foundry & Machine Works, Birmingham, Ala.
Gallagher, D. F. & Co., 223 Commercial st., Boston, Mass.
Ginther, J., Broadway, c. Pratt st., Buffalo, N. Y.
Hanika Iron Fence Co., 19 N. Market st., Springfield, O.
Harris & Winslow Co., 90-109 W. Monroe st., Chicago, Ill.
Hotchkiss, G. C. Field & Co., 624 E. 14th st., N. Y.
Howard, Childs & Co., Lewis Block, Pittsburgh, Pa.
Hudson Bridge Works, Hudson, N. Y.
Iron City Bridge Works, Pittsburgh, Pa.
Iverson, O. & Co., 194 W. Indiana st., Chicago, Ill.
Jackson Architectural Works, 315 E. 28th st., N. Y.
Jones & Benner Co. (The), 218 S. 4th st., Phila., Pa.

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Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Keystone Bridge Co., 51st st. and A. V. R. R., Pittsburgh, Pa.
Kloman, Andrew, Pittsburgh, Pa.
Leick & Cremer, 157 Hudson av, Chicago, Ill.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lindsay & Graff, 622 E. 14th st., N. Y.
Louisville Bridge and Iron Co., Louisville, Ky.
MacCormack, J., Old Stone Mill, Albany, N. Y.
McHoe & Lyon, Dayton, O
Manly & Cooper Mfg. Co., 4150 Elm av., Phila., Pa.; 271 B'way, N.Y.
Marshall Foundry and Construction Co. (Ltd.), 28th st. and R. R. av., Pittsburgh, Pa.
Massillon Bridge Co., Massillon, O.
Matsinger Bros., 1228 Race st., Phila., Pa.
Mesker & Bro., 421-429 S. 6th st., St. Louis, Mo.
Meyers, Fred. J., Mfg. Co. (The), 419-423 Madison av., Covington, Ky.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Mississippi Iron Works and Foundry, 206-208 N. 6th st., St. Louis, Mo.
Missouri Valley Bridge and Iron Works, Leavenworth, Kan.
Morris, L. M., 23d st. and Liberty av., Pittsb'gh, Pa.
Morse Bridge Co., Youngstown, O.
Mutch, Ch., 428 Blue Island av., Chicago, Ill.
New Jersey Steel and Iron Co., Trenton, N J.; (Cooper, Hewitt & Co.), 17 Burling sl., N. Y.
Niagara Bridge Works, Buffalo, N. Y.
Noelke, Fredk., 212-224 S. Pennsylvania st., Indianapolis, Ind.
Novelty Iron Works, 3124 Market st., Phila., Pa.
O'Connell & Lewis, 230 Stewart st., San Francisco, Cal.
Ornamental Wire Works, 137 Spring st., N. Y.
Owen & Chase, c. 12th and Noble sts., Phila., Pa.
Passaic Rolling Mills, Paterson, N. J.; 45 B'way, N. Y.
Peacock, Geo., Selma, Ala.
Penn Bridge Co., Beaver Falls, Pa.
Penna. Construction Co., 132 1st av., Pittsburgh, Pa.
Philadelphia Bridge Works (The), 257 S. 4th st., Phila., Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pittsburgh Bridge Co. (The), 36th st., Pittsburgh, Pa.
Pollock, Wm. B. & Co., Youngstown, O.
Reeves Bros., Niles, O.
Rochester Bridge and Iron Works, Rochester, N. Y.
St. Paul Foundry Co., 4th and Robert sts., St. Paul, Minn.
Schillo, Cossmann & Co., 87-95 N. Polk st., Chicago, Ill.
Seaton & Lea, Atchison, Kan.
Shiffler Bridge Works (The), 47th st. and A. V. Ry., Pittsburgh, Pa.
Snead & Bibb, Louisville, Ky.
Snead & Co., 813 W. Market st., Louisville, Ky.
Snead & Co., Iron Works, 205 La Salle st. (Room 14), Chicago, Ill.
Standard Roof and Bridge Co., 723 Richmond st., Phila., Pa.
Stanwood, G. M. & Co., 261-265 Commercial st., Portland, Me.
Sullivan & Ehlers, 166 B'way, Albany, N. Y.
Thompson Mfg. Co., Cleveland, O.
Thuener, Charles & Co., 6, 8 & 10 S. Jefferson av., St. Louis, Mo.
Tower, J. H., 48, 50, 52 Borden st., Providence, R. I.
Union Iron Mills (Ltd.), 48 5th av., Pittsb'g, Pa.
Van Dorn Iron Works, Cleveland, O.
Vermont Construction Co. (The), St. Albans, Vt.
Wallis Iron Works (The), 7-15 Morris st., Jersey City, N. J.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, Ohio.
Whitney, A. R. & Co., 17 B'way, N. Y.

Iron—Axe.

Cambridge Rolling Mills, Cambridgeport, Mass.
Franconia Iron and Steel Works, Wareham, Mass.
Gilmore & Eustis, Cambridgeport, Mass.
Franconia Iron and Steel Works, Wareham, Mass.

Iron—Band.

Ætna Iron and Steel Co., Bridgeport, O.
Alabama Rolling Mill Co., Birmingham, Ala.
Altoona Iron Co., Altoona, Pa.
Bassett & Presley, Cleveland, O.
Birmingham Rolling Mill Co., Louisville, Ky.
Blandon Rolling Mill Co., Blandon, Pa.
Bristol Rolling Mill, Bristol, Pa.
Cartwright Iron and Steel Co., Steubenville, O.
Catasauqua Mfg. Co., Catasauqua, Pa.
Clark, William, & Co., Pittsb'g, Pa.
Cohoes Rolling Mill (Morrison, Colwell & Page), 253 River st., Troy, N. Y.
Elmira Iron and Steel Rolling Mill Co., Elmira, N. Y.
Enterprise Iron Works (Cartwright, McCurdy & Co.), Youngstown, O.
Hazelton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Helmbacher Forge and Rolling Mill Co., St. Louis, Mo.
Iowa Rolling Mill Co., Burlington, Ia.
Kansas City Bolt and Nut Works, Kansas City, Mo.
Kensington Iron & Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Keystone Horse Shoe Co., 17th & Clearfield sts. Phila., Pa.
Lawrence Iron & Steel Co., Ironton, O.
Lefferts, Marshall & Co., 90 Beekman st., N. Y.
Mahoning Valley Iron Co., Youngstown, O.
Morrison, Colwell & Page, 259 River st., Troy, N. Y.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Painter, J. & Sons, Pittsburgh, Pa.
Pancoast & Rogers, c. Gold & Platt sts., N. Y.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington st., Phila., Pa.
Pomeroy Iron & Steel Co., Pomeroy, O.
Portage Iron Co. (Ltd.), Duncansville, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rome Merchant Iron Mill, Rome, N. Y.
Sharon Iron Co., Sharon, Pa.
Solar Iron & Steel Works (Wm. Clark's Son & Co.), Pittsburgh, Pa.
Star Iron Works (Lindsay & McCutcheon), Allegheny City, Pa.
Syracuse Iron Works, Syracuse, N. Y.
Troy Steel & Iron Co., Troy, N. Y.; 36 B'way, N. Y.
Westerman Rolling Mill (Westerman & Co.), Lockport, N. Y.
Youngstown Rolling Mill Co., Youngstown, O.

Iron—Bar and Merchant.

Ætna Iron & Steel Co., Bridgeport, O.
Ætna Nut Co., Southington, Conn.
Akron Iron Co., Akron, O.
Alabama Rolling Mill Co., Birmingham, Ala.
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsb'gh, Pa.
Allentown Rolling Mills (The), Allentown, Pa.; 237 S. 3d st., Phila., Pa.
Altoona Iron Co., Altoona, Pa.
American Iron & Steel Works (Jones & Laughlins, Ltd.), Pittsb'gh, Pa.
Anchor Brand Axle Works (Sheldon Axle Co.), Wilkesbarre, Pa.
Anchor Iron & Steel Works (L. M. Dayton), 94 W. 2d st., Cincinnati, O.
Anniston Rolling Mill (Noble Bros. & Co.), Anniston, Ala.
Auburn Iron Works (C. W. Tuttle & Co.), Auburn, N. Y.
Bassett & Presley, Cleveland, O.
Baugh Steam Forge Co., 1 Newberry & McMillan Bldg., Detroit, Mich.
Bessemer Rolling Mills, Bessemer, Ala.
Birmingham Rolling Mill Co., Birmingham, Ala.

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Birmingham Rolling Mill Co., Louisville, Ky.
Blandon Rolling Mill Co., Blandon, Pa.
Boonton, Iron Works, Boonton, N. J.
Bridgewater Iron Co., Bridgewater, Mass.
Bristol Rolling Mill Co., Bristol, Pa.
Burden Iron Co., Troy, N. Y.
Byers, A. M. & Co., Pittsburgh, Pa.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Cambridge Rolling Mills, Cambridgeport, Mass.
Capital Iron Works, St. Paul, Minn.
Carnegie Bros. & Co. (Ltd.), 48 5th av., Pittsb'gh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Cartwright Iron & Steel Co., Steubenville, O.
Catasauqua Mfg. Co., Catasauqua, Pa.
Central Iron Works, Helena, Ala.
Central Iron & Steel Co., Brazil, Ind.
Central Pacific Railroad Rolling Mill, Sacramento, Cal.
Champion Steel & Iron Works, Springfield, O.
Cherry Valley Iron Works, Leetonia, O.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Cohoes Rolling Mill (Morrison, Colwell & Page), 253 River st., Troy, N. Y.; Cohoes, N. Y.
Collins Co., Collinsville, Conn.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbia Iron Co., Columbia, Pa.
Columbus Iron Works (P. Hayden Saddlery Hardware Co.), Columbus, O.
Condit, Fuller & Co., Cleveland, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Crescent Nail Works (Standard Nail & Iron Co.), Williamsport, Pa.
Cumberland Rolling Mill, Mount Clare, Balt., Md.
Curtins & Co., Roland, Pa.
Cuyahoga Iron & Stay Bolt Co., Cuyahoga Falls, Ohio.
Danvers Iron Works (Arthur G. Tompkins & Co.), 10 Oliver st., Boston, Mass.
Delaware Rolling Mill (F. P. Howe), Phillipsburg, N. J.
Delaware Rolling Mills (Hughes & Patterson), Kensington st., Phila., Pa.
Diamond State Iron Co., Wilmington, Del.
Dover Iron Works, Dover, N. J.
Duncannon Iron Co., 122 Race st., Phila., Pa.
Eagle Forge, Crockett Depot, Va.
Eagle Iron Works (Curtins & Co.), Roland, Pa.
Eagle Rolling Mill and Tube Works (J. W. Friend & Co.), Pittsburgh, Pa.
Elba Iron and Bolt Co. (The) (Ltd.), Pittsburgh, Pa.
Elmira Iron and Steel Rolling Mill Co., Elmira, N. Y.
Enterprise Iron Works (Cartwright, McCurdy & Co.), Youngstown, O.
Etna Iron Works (Spang, Chalfant & Co.), 66 Sandusky st., Allegheny City, Pa.
Etna Iron Works (Ltd.), Newcastle, Pa.
Eureka Iron and Steel Works, Wyandotte, Mich.
Ewald Iron Co., 941 N. 2d st., St. Louis, Mo.
Fair Hill Forge and Rolling Mill (Gaulbert, McFadden & Caskey), York, Pa.
Findlay Iron and Steel Co., Findlay, O.
Findlay La Grange Rolling Mills, Findlay, O.
Findlay Rolling Mill Co., Findlay, O.
Fort Pitt Iron and Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Franconia Iron and Steel Works, Wareham, Mass.
Franklin Iron Works (Geo. Youtz), Brickerville, Pa.
Gill, Thompson, C. & Co., 210 S. 3d st., Phila., Pa.
Gilmore & Eustis, Cambridgeport, Mass.
Glen Iron Works (Allentown Rolling Mill), Allentown, Pa.
Globe Nail Co., Station A, Boston, Mass.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Graham's Forge (Graham & Johnson), Graham's Forge, Va.
Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Helmbacher Forge and Rolling Mills Co., St. Louis, Mo.
Hollidaysburg Iron and Co., Hollidaysburg, Pa.
Hooven, James & Son, Norristown, Pa.
Houston Rolling Mills, Houston, Tex.
Hubbard Iron Co., Youngstown, O.
Iowa Rolling Mill Co., Burlington, Ia.
Irondale Rolling Mill (Banfield & Co.), Irondale, Ohio.
Ironton Rolling Mill (N. Y. and Ohio Iron and Steel Co.), Ironton, O.
Jackson and Woodin Mfg. Co., Berwick, Pa.
Jersey City Spike and Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Judson Mfg. Co., Oakland, Cal.
Juniata Iron and Steel Works (Shoenberger & Co.), Pittsb'g, Pa.
Juniata Rolling Mill (McLanahan, Smith & Co.), Hollidaysburg, Pa.
Kansas City Bolt and Nut Works, Kansas City, Mo.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Kensington Iron Works (H. Lloyd, Son & Co.), Pittsb'g, Pa.
Kensington Iron and Steel Works (James Rowland & Co.), 220 N. Delaware av., Phila., Pa.
Keystone Horseshoe Co., 17th & Clearfield sts., Phila., Pa.
Kimberly, P. L. & Co., Sharon, Pa.
King's Forge, Shady, Tenn.
Kinsley Iron and Machine Works, Canton, Mass.
Knoxville Iron Co., Knoxville, Tenn.
Lackawanna Iron and Coal Co., Scranton, Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, Ohio.
Laramie Rolling Mills (F. E. Scrymser), Laramie City, W. T.
Lauth, Bernard, Howard, Pa.
Lawrence Iron and Steel Co., Ironton, O.
Lefferts, Marshall & Co., 90 Beekman st., N. Y.
Lewander & Co., 126 State st., Boston, Mass.
Lewis, Henry & Co., 234 S. 4th st., Phila., Pa.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Little Doe Forge (Wm. A. Morley), High Heath, Tenn.
Little Schuylkill Rolling Mill, Port Clinton, Pa.
Lloyd, H., Sons & Co., Pittsb'g, Pa.
Logan, James H., Penn Bldg, Pittsb'g, Pa. **53.**
Logan Iron and Steel Co., 218 S. 4th st., Phila., Pa.
Lookout Iron Co., Chattanooga, Tenn.
McCullough Iron Co. (Northeast, Elkton and Rowlandville), Md.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Mahoning Valley Iron Co., Youngstown, O.
Manhattan Rolling Mill (John Leonard), 451 West st., N. Y.
Massillon Rolling Mill (Jos. Corns & Son), Massillon, O.
Maumee Rolling Mill Co., Toledo, O.
Milesburg Iron Works (McCoy & Linn), Milesburg, Pa.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Milton Mfg. Co., Milton, Pa.
Milton Rolling Mill and Steam Forge (Milton Iron Co.), Milton, Pa.
Mitchell, Tranter & Co., 2d and Elm sts., Cincinnati, O.
Montour Iron & Steel Co., 216 S. 3d st., Phila., Pa.; Danville, Pa.
Morrison, Colwell & Page, 259 River st., Troy, N. Y.
Morrison's Forge (Nat. Morrison), Head of Laurel P. O., Tenn.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
Nashville Iron Co., Nashville, Tenn.
Naylor & Co., 99 John st., N. Y.
Nevegold, Scheide & Co., Bristol, Pa.
New Albany Forge & Rolling Mill Co., New Albany, Ind.

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New Albany Rail Mill Co., New Albany, Ind.
North Chicago Rolling Mill Co., 17 Metropolitan Blk., Chicago, Ill.; 151 Ins. Blk., Milwaukee, Wis.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Ohio Falls Iron Works, New Albany, Ind.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Osborne, D. M. & Co., Auburn, N. Y.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Painter, J. & Sons, Pittsburgh, Pa.
Pancoast & Rogers, cor. Gold & Platt sts., N. Y.
Passaic Rolling Mill Co., Paterson, N. J.; 45 B'way, N. Y.
Pencoyd Iron Works, A. & P. Roberts, 2615 S. 4th st., Phila., Pa.
Pennsylvania Bolt & Nut Co., Lebanon, Pa.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington st., Phila., Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pine Forge (J. C. Frederick & Co.), Mount Jackson, Va.
Pittsburgh Forge & Iron Co., 10th st. and Penn av., Pittsburgh, Pa.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Pollock, Alex., 212 West st., N. Y. 32.
Pomeroy Iron & Steel Co., Pomeroy, O.
Portage Iron Co (Ltd.), Duncansville, Pa.
Portland Rolling Mill, Portland, Me.
Pottsville Rolling Mills, Pottsville Iron & Steel Co., Pottsville, Pa.
Powerville Iron Works, Boonton, N. J.
Pugsley & Chapman, 8 Liberty st., N. Y.
Pullman Iron & Steel Co., Pullman, Ill.; Pullman Bldg., Chicago, Ill.
Reading Bolt & Nut Works (J. H. Sternberg & Son), Reading, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Reeves Iron Co., Canal Dover, O.
Rhode Island Horse Shoe Works, Providence, R. I.
Roan's Creek Forge (B. R. Brown), Shoun's Cross Roads, Tenn.
Roberts, A. & P. & Co., 261 S. 4th st., Phila., Pa.
Rock Island Arsenal, Rock Island, Ill.
Rome Merchant Iron Mill, Rome, N. Y.
Rowland, Wm. & Harvey, Frankford, Pa.
St. Louis Steam Forge & Rolling Mills (A. McDonald & Bro.), St. Louis, Mo.
Sable Iron Works (J. & J. Rogers Iron Co.), Ausable Forks, N. Y.
Sable Iron & Nail Works (Zug & Co., Ltd.), Pittsburgh, Pa.
Sand Hill Forge (Daniel Slimp), Baker's Gap, Tenn.
Schuylkill Haven Iron Co., Pottsville, Pa.
Seyfert Rolling Mill (Samuel R. Seyfert), Reading, Pa.
Sharon Iron Co., Sharon, Pa.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.
Solar Iron & Steel Works (Wm. Clark's Son & Co.), Pittsburgh, Pa.
Springfield Iron Co. Iron & Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Spuyten Duyvil Rolling Mill (Welch & Barnum), 11 Pine st., N. Y.
Standard Rolling Mill (Strothman Bros.), Minneapolis, Minn.
Star Iron Works (Lindsay & McCutcheon), Allegheny City, Pa.
Sterling Chain & Mfg. Co., Cuyahoga Falls, O.
Sunbury Nail, Bar & Guide Iron Co., Sunbury, Pa.
Susquehanna Iron Co., Columbia, Pa.
Swift's Iron & Steel Works, Newport, Ky.
Syracuse Iron Works, Syracuse, N. Y.
Thames Iron Works, Norwich, Conn.
Tidewater Steel Works (Combination Steel & Iron Co.), Chester, Pa.
Tom's Creek Forge (J. L. & D. W. Worth), Tom's Creek, N. C.
Tredegar Iron Works (Tredegar Co.), Richmond, Va.
Trenton Iron Works (New Jersey Steel & Iron Co.), Trenton, N. J.
Troy Steel & Iron Co., Troy, N. Y.; 26 B'way, N. Y.
Trumbull Iron Co., Girard, O.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.
Tuttle, C. W. & Co., Auburn, N. Y.
Ulster Iron Works (Wm. Mulligan), Saugerties, N. Y.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Vesuvius Iron and Nail Works (Moorhead Bros. & Co.), Pittsburgh, Pa.
Virginia Nail and Iron Works Co., Lynchburg, Va.
Vulcan Forge & Iron Works (Long & Co.), Pittsburgh, Pa.
Vulcan Iron Co., Richmond, Va.
Wabash Iron Co., Terre Haute, Ind.
Warren Rolling Mill, Warren, O.
Warren, Salisbury & Nightingale, Providence, R. I.
Wayne Iron and Steel Works (Brown & Co.), Pittsburgh, Pa.
Western Iron Co., Rosedale, Kan.
Westerman Rolling Mill (Westerman & Co.), Lockport, N. Y.
West Lebanon Rolling Mill Co., Lebanon, Pa.
Williamsport Iron and Nail Works, Williamsport, Pa.
Wood, Wm. W., Wood's Falls, N. Y.
Youngstown Rolling Mill Co., Youngstown, O.
Zanesville Iron Works (Ohio Iron Co.), Zanesville, O.

Iron Beams and Channels.

Ætna Iron and Steel Works, 161 La Salle st., Chicago, Ill.
Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.; Allentown, Pa.
Allison Mfg. Co. (The), Phila., Pa.
Althause, S. B. & Co., 101-103 Thompson st., N. Y.
Armstrong Bros., Springfield, O.
Atlanta Bridge and Axle Co., Atlanta, Ga.
Berlin Iron Bridge Co., East Berlin, Conn.
Bethlehem Iron Co., Bethlehem, Pa.
Birmingham Bridge Co., Birmingham, Ala.
Bolles, J. E. & Co., 80-84 W. Woodbridge st., Detroit, Mich.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Carnegie Bros. & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Carroll & Co., D. W. C. (Ltd.), 310 Liberty st., Pittsburgh, Pa.
Catasauqua Mfg. Co., Catasauqua, Pa.
Central Iron and Steel Co., Brazil, Ind.
Chambers & Macbeth, Cleveland, O.
Champion Iron Fence Co., Kenton, O.
Chelmsford Foundry Co., 131 Portland st., Boston, Mass.
Cheney & Hewlett, 201 B'way, N. Y.
Cherry Valley Iron Works, Leetonia, O.
Chester Rolling Mills, Thurlow, Pa.
Chicago Forge and Bolt Co., 234 Clark st., Chicago, Ill.
Cold Spring Iron Works (Mitchell Bros.), Norwich, Conn.
Columbus Bolt Works, Columbus, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Cornell, J. B. & J. M., 141 Center st., N. Y.
Creswell, Samuel J., 23d, c. Cherry st., Phila., Pa.
Cumberland Rolling Mill, Mount Clare, Balt., Md.
Dearborn Foundry Co., 1525 Dearborn st., Chicago, Ill.
Detroit Bridge and Iron Works, Detroit, Mich.
Dickson Mfg. Co., Scranton, Pa.
Dimond, J. G. & F., 209-211 W. 33d st., N. Y.
Dominion Bridge Co. (Ltd.), Lachine, P. Q., and Toronto, Ont.
Eclipse Iron Works, Center and Winslow sts., Cleveland, O.

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Edge Moor Iron Co., 1600 Hamilton st., Phila., Pa.
Edge Moor Iron Works, Wilmington, Del.
Enterprise Iron Works, (Cartwright, McCurdy & Co.), Youngstown, O.
Ewald Iron Co., 941 N. 2d st., St. Louis, Mo.
Globe Iron Works, 41-45 Indiana st., Chicago, Ill.
Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Harrisburg Car Mfg. Co., Harrisburg, Pa.
Hawkins, Chas. H., 93 Adams st., Chicago, Ill.
Healey Iron Works, cor. N. 4th & 5th sts., B'klyn, N. Y.
Imsley, Shire & Tullook, Leavenworth, Kan.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Jones & Benner Co. (The), 218 S. 4th st., Phila., Pa.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Keepers & Riddell, Milwaukee, Wis.
Keystone Bridge Co., 51st st. and A. V. R. R., Pittsburgh, Pa.
King Iron Bridge & Mfg. Co., Cleveland, O.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Litchfield Car & Machine Co., Litchfield, Ill.
Little Schuylkill Rolling Mill, Port Clinton, Pa.
Lombard, Geo. R. & Co., Augusta, Ga.
Louisville Bridge & Iron Co., Louisville, Ky.
Lukens Rolling Mills (Chas. Huston & Sons), Coatesville, Pa.
MacCormack, J. (Old Stone Mill), Albany, N. Y.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Manly & Cooper Mfg. Co., 4150 Elm av., Phila., Pa.; 271 B'way, N. Y.
Massillon Bridge Co., Massillon, O.
Maumee Rolling Mill Co., Toledo, O.
Michigan Iron Works, Grand Rapids, Mich.
Missouri Valley Bridge & Iron Works, Leavenworth, Kan.
Mitchell, Tranter & Co., 2d and Elm sts., Cincinnati, O.
New Albany Forge & Rolling Mill Co., New Albany, Ind.
New Jersey Steel & Iron Co., Trenton, N. J., and (Cooper, Hewitt & Co.), 17 Burling sl., N. Y.
Niagara Bridge Works, Buffalo, N. Y.
Noelke, Frederick, 212-224 S. Pennsylvania st., Indianapolis, Ind.
Novelty Iron Works, 3124 Market st., Phila., Pa.
Ohio Falls Iron Works, New Albany, Ind.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Passaic Rolling Mill Co., Paterson, N. J.; 45 B'way, N. Y.
Pease, P., 177 La Salle st., Chicago, Ill.
Pencoyd Iron Works, 261 S. 4th st., Phila., Pa.
Penn Bridge Co., Beaver Falls, Pa.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Philadelphia Bridge Works (The), 257 S. 4th st., Phila., Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Phœnixville Bridge Works, 410 Walnut st., Phila., Pa.; 45 William st., N. Y.
Pittsburgh Bridge Co., Pittsburgh, Pa.
Pittsburgh Forge and Iron Co., Pittsburgh, Pa.
Pottstown Iron Co., Pottstown, Pa.
Pottsville Iron and Steel Co., 115 Dearborn st., Chicago, Ill.
Pottsville Rolling Mills (Pottsville Iron and Steel Co.), Pottsville, Pa.
Trenton Iron Works (New Jersey Steel and Iron Co.), Trenton, N. J.
Riverside Bridge and Iron Works, Paterson, N. J.
Roberts, A. & P. & Co., 261 S. 4th st., Phila., Pa.
Rochester Bridge and Iron Works, Rochester, N. Y.
Sheffield, Thos. R., 131-133 Conselyea st., B'klyn, N. Y.
Shiffler Bridge Works, Pittsburgh, Pa.
Sioux City Foundry and Machine Works, Sioux City, Ia.
Snead & Bibb, Louisville, Ky.
Standard Iron Co., 4th st. and 9th av., S. Minneapolis, Minn.
Standard Roof and Bridge Co., 723 Richmond st., Phila., Pa.
Stroud & Co., 104 John st., N. Y.
Sullivan & Ehlers, 166 B'way, Albany, N. Y.
Sweeney, W. A. & Bro., Jeffersonville, Ind.
Swift's Iron & Steel Works, Newport, Ky.
Syracuse Iron Works, Syracuse, N. Y.
Tredegar Iron Works (Tredegar Co.), Richmond, Va.
Trenton Iron Works (New Jersey Steel and Iron Co.), Trenton, N. J.
Union Iron Mills (Carnegie Bros. & Co.) (Ltd.), Pittsburgh, Pa.
Vermont Construction Co. (The), St. Albans, Vt.
Virginia Nail and Iron Works Co., Lynchburg, Va.
Vulcan Forge and Iron Works (Long & Co.), Pittsburgh, Pa.
Wabash Iron Co., Terre Haute, Ind.
Wallis Iron Works (The), 7-15 Morris st., Jersey City, N. J.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, Ohio.
Warden, H'y, Germantown, Phila., Pa.
Waters, W. L. & Sons, Nashville, Tenn.
Western Forge and Rolling Mills, 210 N. 3d st., St. Louis, Mo.
Wheeler Foundry Co., 138 Mechanic st., Worcester, Mass.
Woelke, Frederick, 212-224 S. Pennsylvania st., Indianapolis, Ind.
Wrought Iron Bridge Co., Canton, O.

Iron Billets.

Bethlehem Iron Co., Bethlehem, Pa.
Ewald Iron Co., St. Louis, Mo.
Fort Pitt Iron and Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Keene Forge (W. F. & S. H. Weston), Keene, N. Y.
Lickdale Iron Co., Lebanon, Pa.
National Tube Works Co., McKeesport, Pa.
Pope, Thos. J. & Bro., 292 Pearl st., N. Y.
Tremont Nail Co., West Wareham, Mass.

Iron Blooms—(Charcoal).

Bridgeport Rolling Mill Co., Bridgeport, Conn.
Burgess Iron and Steel Works, Portsmouth, O.
Canton Bloomary Co., Collinsville, Conn.
Carlisle Iron Works (J. C. Bucher), Boiling Springs, Pa.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Carnegie Bros., & Co., 48 5th av., Pittsburgh, Pa.
Charming Forge (W. & B. F. Taylor), Womelsdorf, Pa.
Collins, H. E. & Co., Lewis Blk., Pittsburgh, Pa.
Curtins & Co., Roland, Pa.
Cove Forge (Wm. McIlwain & Sons), Reading, Pa.
Eagle Forge, Curtins & Co., Roland, Pa.
Easton Sheet Iron Works, Easton, Pa.
Ellendale Forge (J. H. Lick & Co.), Ellendale Forge P. O., Pa.
Ellwood Forge, Ellwood, Pa.
Ewald Iron Co., St. Louis, Mo.
Fort Pitt Iron and Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
French Creek Forge (Esther Kaufman), St. Peter's P. O., Pa.
Gibralter Iron Works (Simon Seyfert & Co.), Reading, Pa.
Howard Iron Works, Howard, Pa.
Juniata Forge (J. A. & E. Eichelberger), Petersburg, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Laclede Rolling Mills, 204 N. 3d st., St. Louis, Mo.
Laurel Forge (South Mountain Mining and Iron Co.), Pine Grove Furnace P. O., Pa.
Liberty Forge (Boyer Bros.), Lisburn, Pa.
Lichdale Iron Co., Lebanon, Pa.
Lindsay, Parvin & Co., 133 S. 4th st, Phila., Pa.

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Lucknow Forge (John W. Reilly), Harrisburg, Pa.
Milesburgh Iron Works (McCoy & Linn), Milesburgh, Pa.
Mont Alto Iron Works, Mont Alto, Pa.
National Tube Works Co., McKeesport, Pa.
Northeast Forge (McCullough Iron Co.), Northeast, Md.
Paulding Forge (Graff, Bennett & Co.), Cecil, O.
Perry Forge (Seidel Bros.), Marysville, Pa.
Phœnix Rolling Mill, 410 Walnut st., Phila., Pa.
Pine Forge (J. C. Frederick & Co.), Mount Jackson, Va.
Pope, Thos. J. & Bro., 292 Pearl st., N. Y.
Port Oram Forge (Port Oram Mfg. Co.), Port Oram, N. J.
Pottstown Iron Co., Pottstown, Pa.
Principio Forge (Geo. P. Whitaker Co.), Principio Furnace P. O., Md.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Springton Forge (M. K. Genner), Wallace, Pa.
Steam Forge, Rockaway, N. J.
Tremont Nail Co., West Wareham, Mass.
Warren Forge (American Sheet Iron Co.), Phillipsburg, N. J.

Iron—Boiler Heads.

Riverside Iron & Steel Co., Cincinnati, O.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.

Iron—Boiler Tube.

Columbia Rolling Mill Co., Columbia, Pa.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.
Gibraltar Iron Works (Simon, Seyfert & Co.), Reading, Pa.
Laurel Iron Works, Coatesville, Pa.
National Tube Works Co., McKeesport, Pa.
Republic Iron Works, 1st av. and Smithfield st., Pittsburgh, Pa.
Tyrone Iron Co., Tyrone, Pa.

Iron—Bolt and Nut.

Ætna Nut Co., Southington, Conn.
Cuyahoga Iron & Stay Bolt Co., Cuyahoga Falls, Ohio.
Danvers Iron Works (Arthur G. Tompkins & Co.), 10 Oliver st., Boston, Mass.
Fuller, Bros. & Co., 139 Greenwich st., N. Y.
Hamer, John W., 140 Centre st., N. Y.
Hubbard Iron Co., Youngstown, O.
Jones, B. M. & Co., 13 Oliver st., Boston, Mass.
Kansas City Bolt & Nut Works, Kansas City, Mo.
Niles Rolling Mill (Coleman, Shields & Co.), Niles, O.
Ohio Falls Iron Works, New Albany, Ind.
Reading Bolt & Nut Works (J. H. Sternbergh & Son), Reading, Pa.
Sterling Chain & Mfg. Co., Cuyahoga Falls, O.
Trumbull Iron Co., Girard, O.

Iron—Castings.

Byers, A. M. & Co., Pittsburgh, Pa.

Iron—Chains.

Columbus Iron Works (P. Hayden Saddlery Hardware Co.), Columbus, O.
Trumbull Iron Co., Girard, O.

Iron—Chute.

Keystone Iron Works (Ltd.), Reading, Pa.

Iron—Cold Rolled.

Wilmot & Hobbs Mfg. Co., Railroad and Hancock aves., Bridgeport, Conn.

Iron—Corrugated.

Bakewell & Mullins, Salem, O.
Berlin Iron Bridge Co., East Berlin, Conn.; Binghamton, N. Y.
Cambridge Roofing Co., Cambridge, Conn.
Canton Iron Roofing Co., Canton, O.
Chouteau, Harrison & Valle Iron Co., 939 N. 2d st., St. Louis, Mo.
Cincinnati Corrugating Co., Eggleston av., ab. 6th st., Cincinnati, O.
Clay, Geo. W., Pittsburgh, Pa. **54.**
Cleveland Rolling Mill Co., Cleveland, O.
Conner, Chas. H., Clay, c. Franklin st., Louisville, Ky.
Conshohocken, Pennsylvania and Corliss Iron Works (J. Wood & Bros. Co.), Conshohocken, Pa.
Excelsior Iron and Copper Works, Aurora, Ind.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Gallagher, D. F. & Co., 223 Commercial st., Boston, Mass.
Garry Iron Roofing Co., 158 Merwin st., Cleveland, O.
Globe Iron Roofing and Corrugating Co., Cincinnati, O.
Holton Iron Roofing Co., New Lisbon, O.
Hynandman, W. G. & Co., 52-54 E. 2d st., Cincinnati, O.
Kansas City Corrugated Iron and Ventilating Co., Kansas City, Mo.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Keystone Bridge Co., 51st st. and R. R. av., Pittsburgh, Pa.
Kinseley & Miller, 129-131 S. Clinton st., Chicago, Ill.
Lefferts, Marshall & Co., 54 Cliff st., N. Y.
Licking Iron Works, Licking Rolling Mills Co., Covington, Ky.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lloyd Iron Roofing and Paint Co., 56 Lake st., Chicago, Ill.
Marshall, Lefferts & Co. (Agts.), 417 W. 24th st., N. Y.
Merry, John & Co., 535 W. 15th st., N. Y.
Mesker & Bro., 421-425 S. 6th st., St. Louis, Mo.
Missouri Iron Roofing and Corrugating Co., 1501 S. 2d st., St. Louis, Mo.
Moseley Iron Bridge and Roof Co., 5 Dey st., N. Y.
National Sheet Metal Roofing Co., 510 E. 20th st., N. Y.
N. Y. Iron Roofing and Corrugating Co., 115 B'way, N. Y.
Noyes & Wines, 44 Centre st., N. Y.
Porter Iron Roofing Co., 101-105 W. Front st., Cincinnati, O.
Sagendorph Iron Roofing and Corrugating Co., St. Louis, Mo.; 14 E. 2d st., Cincinnati, O.
St. Louis Corrugating Co., 117 Soulard st., St. Louis, Mo.
Scaife, Wm. B. & Sons, 119 1st av., Pittsburgh, Pa.
Standard Iron Co., Bridgeport, Conn.
Thompson Mfg. Co., Cleveland, O.
Thuener, Charles & Co., 6, 8 and 10 S. Jefferson av., St. Louis, Mo.
Van Noorden, E. & Co., 387 Harrison av., Boston, Mass.
Wines, Wm. D., 44 Centre st., N. Y.

Iron Crestings.

Chelmsford Foundry Co., 131 Portland st., Boston, Mass.
Pond, Moses & Co., 79-81 Blackstone st., Boston, Mass.
Standard Wire and Iron Works, 29-31 S. Water st., Chicago, Ill.
Toledo Wire & Iron Works, 242 Summit st., Toledo, O.
Van Noorden, E. & Co., 383-387 Harrison av., Boston, Mass.

Iron Edge Tool.

Cohoes Rolling Mill (Morrison, Colwell & Page), 253 River st., Troy, N. Y.

Iron Fittings.

Allison Mfg. Co. (The), 32d & Walnut sts., Phila., Pa.

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Belfield, H., & Co., 435 N. Broad st., Phila., Pa.
Bent Samuel S., & Son, 111 Chambers st., N. Y.
Blakslee E. G., Mfg. Co., (The), Sing Sing, N. Y.
Braman, Dow & Co., 3-6 Haymarket st., Boston, Mass.
Brown, Owens & Taylor, 12th & Buttonwood sts., Phila., Pa.
Clark & Hawley, 15-19 E. 9th st., Cincinnati, O.
Cox & Sons, 204 N. 4th st., Phila., Pa.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Cunningham Iron Works Co., 109 Milk st., Boston, Mass.
Curtis & Co., Cohoes, N. Y.
Eaton, Cole & Burnham Co. (The), 82-84 Fulton st., N. Y.
Folsom E., & Co., Exeter, N. H.
Hardwicke & Ware, Buffalo, N. Y.
Haxtun Steam Heater Co., Kewanee, Ill.
Illinois Malleable Iron Co., Diversay av. & C. & N. U. R. R., Chicago, Ill.
Jarecki Mfg. Co., Erie, Pa.
Kirkup, Wm., & Son, S. E. c. Pearl and Ludlow sts., Cincinnati, O.
McNab & Harlan Mfg. Co., 56 John st., N. Y.
Morris, Tasker & Co., 222 and 224 S. 3d st., Phila., Pa.
Morse, Jas. O., 76 John st., N. Y.
Morton, H. M., & Co., 25 Washington st., Boston, Mass.
Mott, J. L., Iron Works (The), 88 and 90 Beekman st., N. Y.
Progressive Iron Works, 251-255 Greenpoint av., Brooklyn, E. D., N. Y.
Providence Steam & Gas Pipe Co., Providence, R. I.
Rushton, J. H., Canton, N. Y.
Snead & Bibb, Louisville, Ky.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.
Taws & Hartman, 1233 N. Front st., Phila., Pa.
Taylor & Boggis Foundry Co. (The), 65 Central way, Cleveland, O.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Watson & Stillman, 204 E. 43d st., N. Y.
Worswick Mfg. Co. (The), 101 Water st., Cleveland, O.

Iron—Flat.

Blandon, Rolling Mill Co., Blandon, Pa.
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Champion Steel & Iron Works, Springfield, O.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Delaware Rolling Mill (F. P. Howe), Phillipsburg, N. J.
Iowa Rolling Mill Co., Burlington, Iowa.
Jersey City Spike & Bolt Works (W. Ames & Co.), 312 Wash'n st., Jersey City, N. J.
Milton Rolling Mill & Steam Forge (Milton Iron Co.), Milton, Pa.
Standard Rolling Mill (Strothman Bros.), Minneapolis, Minn.
Virginia Nail & Iron Works Co., Lynchburg, Va.

Iron—Flues.

Conshohocken, Pennsylvania & Corliss Iron Works (J. Wood & Bros. Co.), Conshohocken, Pa.
Coatesville Iron Works, Coatesville, Pa.
Laurel Iron Works, Coatesville, Pa.
Locust Point Iron & Steel Works (Coates & Co.), Balt., Md.
Lukens Rolling Mills (Chas. Huston & Sons), Coatesville, Pa.
Pottsgrove Iron Works (Potts Bros. Iron Co., Ltd.), Pottstown, Pa.

Iron Founders and Workers.

Abendroth Bros., Port Chester, N. Y.
Acme Iron Works, St. Johnsbury, Vt.
Adams, Morrisy & McCarthy, Leadville, Col.
Adams, R. F. & Co., Nashville, Tenn.
Adams, S. & Son, Rome, N. Y.
Adams, S. J. & Co., 14th, c. Etna st., Pittsburgh, Pa.
Adams, W. L., Corinth, Miss.
Adams Bros. & Co., Findlay, O.
Adams & Storril, 900 N. 9th st., Phila., Pa.
Ader & Gairus, Nashville, Tenn.
Ætna Foundry & Machine Shop, Springfield, Ill.
Ætna Iron Works, Kingsbury, c., Ohio st., Chicago, Ill.
Ætna Iron Works Co., 217 Fremont st., San Francisco, Cal.
Ætna Iron & Nail Co., Bridgeport, O.
Ætna Iron & Steel Co., 166 E. Lake st., Chicago, Ill.
Ætna Iron and Steel Works, 161 La Salle st. (Room 34), Chicago, Ill.
Agerter, Stevenson & Co., Upper Sandusky, O.
Aiken & Leighton, Birmingham, Ala.
Ainslie, Cochran & Co., Main, c. 10th st., Louisville, Ky.
Akron Iron Co., Butchel, O.
Albany Stove Co., Tivoli st., Albany, N. Y.
Albert, G. A., 390 6th st., Milwaukee, Wis.
Albertson & Douglass Machine Co., New London, Conn.
Albuquerque Foundry and Machine Co., Albuquerque, New Mexico.
Alcott, T. J. & Son, Mount Holly, N. J.
Aldon, J. C. & Son, Las Vegas, N. M.
Alden, J. F., Rochester, N. Y.
Alexander, H., Wellsville, O.
Alexander, J., Columbia, S. C.
Alexander, J. F., Westerville, O.
Alexander Bros., Murphysboro', Ill.
Alexander, Bradley & Dunning, 96 W. Water st., Syracuse, N. Y.
Alice Furnace Co., Birmingham, Ala.; 224 S. 4th st., Phila., Pa.
Allan, G. G., Nevada City, Cal.
Allen, L. L., Newark, Del.
Allen Iron Works, Adams, Mass.
Allen & Charlesworth, Honesdale, Pa.
Allen & Co., 140 E. 41st st., N. Y.
Allen & Cram, Raleigh, N. C.
Allen & Griffith, Dorset, Vt.
Allentown Iron Co., 222 S. 3d st., Phila., Pa.
Allis, E. P. & Co., Clinton, c. Florida st., Milwaukee, Wis
Allison, John & Co., Hazleton, Pa.
Allison, L. S., Hazleton, Pa.
Althause, S. B. & Co., 103 Thompson st., N. Y.
Amadon, S. B., Staffordville, Conn.
American Combined Iron Steel Co., 267 S. 4th st., Phila., Pa.
American Foundry (The), New Albany, Ind.
American Machine and Model Works, 111 1st st., San Francisco, Cal.
American Sheet Iron Co. (The), Phillipsburg, N. J.
American Steel and Iron Association, 261 S. 4th st., Phila., Pa.
American Tool and Machine Co., Hyde Park, Mass.
Ames, E. J., Austin, Minn.
Ames Iron Works, 18 S. Canal st., Chicago, Ill.; Oswego, N. Y. 64.
Ames Mfg. Co., 33 Pemberton sq., Boston. Mass.; Chicopee, Mass.
Anchor Foundry Co., 96 North av., Allegheny, Pa.
Anchor Iron and Steel Works, 184 W. 2d st., Cincinnati, O.
Anderson, A., Lafayette, Ore.
Anderson, C. C., Jeffersonville, Ind.
Anderson Foundry and Machine Works, Anderson, Ind.
Anderson, W. A., Norfolk, Va.
Anderson & Sons, Moorhead, Minn.
Andover Iron Co., 240 South st., Phila., Pa.; Phillipsburg, N. J.
Andrews, F. H., 545 W. 33d st., N. Y.
Andrus, Loeffler & Co., Keokuk, Ia.
Andrews Bros. & Co., 53 Dearborn st., Chicago, Ill.
Andrews & Hitchcock, Youngstown, O.; Hubbard, O.
Apollo Iron and Steel Co., Pittsburgh, Pa.

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Apollo Sheet Iron Works, 543 Wood st., Pittsburgh, Pa.
Arcade Malleable Iron Co., 63-67 Washington sq., Worcester, Mass.
Archer, E., Paterson, N. J.
Architectural Iron Works, 230 Stewart st., San Francisco, Cal.
Arcl, J. B., 454 Rodney st., Brooklyn, N. Y.
Armourdale Foundry Co., Armourdale, Kan.
Armstrong & Co., Perryville, Md.
Arnold & Co., Norwalk, Conn.
Arnold & Pierce, Hammond, c. R. R. st., Worcester, Mass.
Ashland Iron Co., 33 Chamber of Commerce Bldg., Balto., Md.
Ashcroft Bros., Parsons, Kan.
Ashland Foundry and Machine Shop, Ashland, Ky.
Astall, J., Galveston, Tex.
Atchison Co-operative Foundry and Stove Works, Atchison, Kan.
Aten & Wolverton, Hope, N. J.
Athens Foundry & Machinery Works, Athens, Ga.
Athens Water Wheel & Machine Co., Athens, O.
Athol Machine Co., Athol, Mass.
Atlas Foundry, 213 Mission st., San Francisco, Cal.
Atwater, S., Independence, Kansas.
Atwood Machine Co., Stonington, Conn.
Auburn Foundry Co., Auburn, Me.
Austin, E. R., Norwalk, Conn.
Avery, B. F., & Sons, Main, c. 15th st., Louisville, Ky.
Axford, W., 19th, c. Harrison st., San Francisco, Cal.
Ayres, Abraham, 506 W. 45th st., N. Y.
Bacon, W. F., Skowhegan, Me,
Bagley & Sewall Co., Watertown, N. Y.
Bailey Mfg. Co., Owasso, Mich.
Bailey, W., & Co., 87 Chicago st., Milwaukee, Wis.
Baird Iron Co., Gore, O.
Bain Mfg. Co., Charleston, Ill.
Baker, H., Toledo, O.
Ball, Mitchell & Co., Maysville, Ky.
Ballard & Minchin, Hermon, c. Johnson st., Newark, N. J.
Baltimore Car Wheel Co., Payson, c. Patterson av., Baltimore, Md.
Baltimore Iron Co., 1243 Patuxent st., Baltimore, Md.
Baltimore Smelting Works, 213 E. York st., Baltimore, Md.
Baldwin, E. N., Huntington, Conn.
Bambrook & Kaule, Jacksonville, Ill.
Bangor Foundry & Machine Co., 8-10 Central st., Bangor, Me.
Banhart S., Attica, Ind.
Bannan, F. B., Pottsville, Pa.
Barbee Wire & Iron Works, 100 Lake st., Chicago, Ill.
Barber, W. H., & Co., Allentown, Pa.
Barbour, W. O., & Co., Cambridgeport, Mass.
Barclay & Hoeft, Merced, Cal.
Barker, I., & Co., Braidwood, Ill.
Barlow, Condit & Morris, 28 Orange st., Newark, N. J.
Barnes Bros., Maquoketa, Ia.
Barnet, O., 105 Hamilton st., Newark, N. J.
Barnett, R. M. & H. B., Johnson, c. Hermon st., Newark, N. J.
Barney, W. O. & C., Searsport, Me.
Barney & Kilby, Sandusky, O.
Barnum, S. H., Whitney av., New Haven, Conn.
Barnum, Richardson & Co., Lime Rock, Conn.
Barnum & Ireland, Plainwell, Mich.
Baronowsky, J., Chester, Ill.
Barr Bros., Douglass, Mass.
Barrett's, B., Sons, Wooster, O.
Barrows, Savery & Co. (Ltd.), Front, c. Reed st., Phila., Pa.
Barstow Stove Co., Point, c. Chestnut st., Providence, R. I.
Bartlett, Hayward & Co., Pratt and Scott sts., Balt., Md.; 69 Wall st., N. Y.
Bartlett, A. F. & Co., East Saginaw, Mich.
Bartlett, F., Santa Cruz, Cal.
Bartlett, S. Bristol, Vt.
Bartley, Wm. & Son, Bartleyville, N. J.
Bascom, H. C., River, c. Hoosick st., Troy, N. Y.
Bass, J. H., 97 Dearborn st., Chicago, Ill.; Fort Wayne, Ind.
Bates, J., 200 President st., Balt., Md.
Bates, M. C., Bradford, N. H.
Bath Iron Works, Bath, Me.
Bath & Fosmir, Los Angeles, Cal.
Bauch, F., Alliance, O.
Baugher, Kurtz & Stewart, York, Pa.
Baughman Bros., Albion, Ind.
Baugh Steam Forge Co., 1 Newberry st., Detroit, Mich.
Baxter, I. J., Peekskill, N. Y.
Bay City Iron Co., Bay City, Mich.
Bay City Iron Works, 353 Mission st., San Francisco, Cal
Beall & Paul, Staunton, Va.
Beard, Long & Co., Greenville, S. C.
Beatrice Iron Works (The), Beatrice, Neb.
Beauford Iron Co., Ishpeming, Mich.
Bechmann, F., 171 Baronne st., New Orleans, La.
Beckett & McDowell Mfg. Co., 120 Liberty st., N. Y.
Beckwith, P. D., Dowagiac, Mich.
Beech, J. & Son, Mason, Mich.
Beggs & Bro., Birmingham, Ala.
Behner Bros., La Grange, O.
Belcher, D., Easton, Mass.
Belfont Iron Furnace, Ironton, O.
Belfont Iron Works Co., 13 Johnston Bldgs., Cincinnati, O.
Belknap Iron Foundry, Laconia, N. H.
Bellaire Nail Works, Bellaire, O.
Bell, C. S. & Co., Hillsboro, O.
Bell, D., Norton, c. Evans st., Buffalo, N. Y.
Bell & Fyfe, S. 11th st., c. Kent av., Brooklyn, E. D., N. Y.
Belton, J., North Platte, Neb.
Benedict, J., 548 W. 55th st., N. Y.
Benjamin, H., 343 Magazine st., New Orleans, La.
Benjamin & Allen, Oakland, Me.
Benner, M. & Co, 260 S. Jefferson st., Chicago, Ill.
Bennett Mfg. Co., Watertown, Wis.
Benoit, J. P., 251 Croghan st., Detroit, Mich.
Benson, J., Centralia, Ill.
Bent, Samuel S. & Son, 111 Chambers st., N. Y.; Port Chester, N. Y.
Benwood Iron Works, Martin's Ferry, O.: Wheeling, W. Va.
Berglin, H., Dassell, Minn.
Berry, H. J. & Sons, 89 E. Indiana st., Chicago, Ill.
Bessie Furnace, New Straitsville, O.
Bessie Iron Co., Straitsville, O.
Bertenshaw, S., Black Hawk, Col.
Beverly Ore Co., 320 Walnut st., Phila., Pa.
Bickenderfer, R., Lancaster, Pa.
Bidwell & Watson, Greenville, Cal.
Bigelow & Little, San Francisco, Cal.
Bignell, F. B. & Co., Ionia, Mich.
Bing, J., 3737 Filbert st., Phila., Pa.
Bingham & Taylor, 157 Church st., Buffalo, N. Y.
Birch, Wm. H., San Francisco, Cal.
Birch Bros., Crawfordsville, Ind.
Bird, H. M., Cambridgeport, Mass.
Bird & Baker Foundry Co., Battle Creek, Mich.
Birmingham Iron Foundry, Birmingham, Conn.
Birmingham Iron and Machine Works, Birmingham, Ala.
Birmingham Rolling Mill Co., Main, c. 4th st., Louisville, Ky.
Bisbee, Endicott & Co., Chelsea, Mass.
Bissell, David S., Pittsburgh, Pa.
Bittenbender, M. H., Knoxville, Ia.
Blackman & Welch, Georgetown, Col.
Blair Iron and Coal Co., 218 S. 4th st., Phila., Pa.
Blake, E., Huntington, Pa.
Blake, H. A., Cheboygan, Mich.
Blake & Duffy, 517 W. 25th st., N. Y.
Blakeney Foundry Co., Springfield, O.
Blakslee, E. G. Mfg. Co. (The), 76-78 Centre st., N. Y.; Sing Sing, N. Y.
Blandon Rolling Mill Co., 112 John st., N. Y.
Blandy, F. J. L., Zanesville, O.
Blettner Mfg. Co., 884 Central av., Cincinnati, O.

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Bliss, E. W., Jay, c. Front st., Brooklyn, N. Y.
Bloecker, H. & Co., Grand Haven, Mich.
Bloom, Born & Newcomb, Kenton, O.
Bloom Furnace, Portsmouth, O.
Bloomer, G. C. & Co., Ronceverte, W. Va.
Bloomsburg Iron Co., 122 Race st., Phila., Pa.
Blume, A. F. & Co., 611 N. Halstead st., Chicago, Ill.
Blymyer Mfg. Co., 664 W. 8th st., Cincinnati, O.
Board, J. L., 59 S. Jefferson st., Chicago, Ill.
Bobenwreath, B. & Sons, Petersburg, O.
Bocage, J. W. & Co., Pine Bluff, Ark.
Boech, E., Lansing, Ia.
Boice, J. & M., Byron, Mich.
Bolter, A. & Sons, 172 Van Buren st., Chicago, Ill.
Bonnett, G. W., St. Johnsbury, Vt.
Bonton & Co., 164 Dearborn st. (Room 217), Chicago, Ill.
Booth, Miller & Co., Youngstown, O.
Bordentown Foundry & Machine Works, Bordentown, N. J.
Borgner & O'Brien, 23d, ab. Race st., Phila., Pa.
Bostick, A., Millington, Mich.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Bossie Iron Works, Keenaville, N. Y.
Bosworth, W. S., Warren, R. I.
Bouton Foundry Co., 2600-2626 Anchor av., Chicago, Ill.
Bouton & Co., Aurora, Ill.
Bower Barff Rustless Iron Co., 35 B'way, N. Y.
Bowering, B., Fredericksburg, Va.
Bowers, J. C. & Son, Marysville, Kan.
Bowers, G. P., Woburn, Mass.
Bowers, R. Q. & Son, Hackettstown, N. J.
Bowie & Geroge, Rome, Ga.
Bowler & Co., 14 Winter st., Cleveland, O.
Bowyer, J. & Co., Omaha, Neb.
Boyce, A. J., East Liverpool, O.
Boyd, J. H., Portland, Ore.
Boyd, J. P., Waldoborough, Me.
Boyd, R. T., Beatrice, Neb.
Boyts, Porter & Co., Connellsville, Pa.
Bradley & Hubbard Mfg. Co., Hanover st., Meriden, Conn.
Braid Bros., 86 Quay st., B'klyn, N. Y.
Bramley Bros. & Co., Lockport, N. Y.
Brayton, L. & Co., Warwick, R. I.
Breisnich & McCauley, Brunswick, Ga.
Brennan & Co., 801 W. Green st., Louisville, Ky.
Brewer, H. & Co., Tecumseh, Mich.
Bridgeport Forge Co., 71 Wall st., N. Y.
Bridgeport Malleable Iron Co., Railroad, c. South av., Bridgeport, Conn.
Bridgewater Iron Co., Bridgewater, Mass.
Briggs, G. W., Bedford, Ia.
Briggs & Kelley, Ayer, Mass.
Brink, W. H., Burlington, Vt.
Brinly, Miles & Hardy Co., 348 E. Main st., Louisville, Ky.
Brison & Donaldson, Warrensburgh, Mo.
Britton Iron & Steel Co., Ft. Wason, Cleveland, Ohio.
Broatch, E. W. J., Omaha, Neb.
Brock, E., Moorestown, N. J.
Brockton Iron Foundry, Brockton, Mass.
Brooklyn City Foundry, Smith, c. Grinnell st., Brooklyn, N. Y.
Brooks, E. & G., Iron Co., Birdsboro, Pa.
Brooks, T. H. & Co., 708-714 Lake st., Cleveland, Ohio.
Brooks, Tyler & Barker, Selma, Ala.
Broumoeller & Mueller, 90 W. Van Buren st., Chicago, Ill.
Brown, A. K., Newton, Iowa.
Brown, Bonnell & Co., Struthers, O.
Brown Bros. Mfg. Co., S. Clinton, nw. c. Jackson st., Chicago, Ill.
Brown Cotton Gin Co., Pequot av., New London, Conn.
Brown C. W. & Co., Hardonfield, N. J.
Brown, E. E. & Co., 138 and 148 Hazel st., Phila., Pa.
Brown, Harvey H. & Co., 101 St. Clair st., Cleveland, O.
Brown, J., Pawtucket, R. I.
Brown, J. W., Harrisburg, Pa.
Brown, R. G. & Co., Waltham, Mass.
Brown & Co., 10th st., c. Duquesne Way, Pittsburgh, Pa.
Brown & Colburn, Bowling Green, Ky.
Brown & Patterson, Marcy av. c. Hope st., Brooklyn, N. Y.
Brown & Van Arsdale Mfg. Co., 154 E. Lake st. (Room 17), Chicago, Ill.
Bruce, T. S., Richmond, Va.
Bruce & Archer, Richmond, Va.
Brucker, M., N. Lincoln st., c. W. Chicago av., Chicago, Ill.
Brundin, J. G., Albert Lea, Minn.
Brunner, C., Peru, Ill.
Brunner & Duncan, Alton, Ill.
Bryant, G. M., Minneapolis, Minn.
Bryant & Lord, 884 W. 6th st., Cincinnati, O.
Buckeye Furnace Co., Riverton, O.
Buck, J. G., Carrollton, O.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Buckelew, F. L. & Co., Jamesburgh, N. J.
Buckey & Firestone, Frederick, Md.
Buckhorn Furnace, Ironton, O.
Buckley, S. E., 209 S. 3d st., Phila., Pa.
Buckley, T. & Co., Kalamazoo, Mich.
Buckwalter & Co., Elizabethport, N. J.
Buffalo Cast Iron Pipe Co., 344 Exchange st., Buffalo, N. Y.
Buffalo Hardware Co., 559 Swan st., Buffalo, N. Y.
Buffalo Malleable Iron Works, 189 Tonawanda st., Buffalo, N. Y.
Buhl, Sons & Co., 103 Woodbridge st., w., Detroit, Mich.
Buhler, Henry B, 50 Park st., N. Y.
Builders' Iron Foundry, 22 Codding st., Providence, R. I.
Builders' Iron Works, 470 Grand st., N. Y.
Bulger, J., 54 N. 2d st., B'klyn, N. Y.
Bull, W. N., Fayette, O.
Burch, N., West Toledo, O.
Burden Iron Co., 6th Ward st., S. Troy, N. Y.
Burke & Kennedy, Bowling Green, Mo.
Burkhardt & Heusch, 93 W. Harrison st., Chicago, Ill.
Burkhart, C. & Co., Chambersburg, Pa.
Burlington Rolling Mill Co., Burlington, Ia.
Burnet & Co., 706 E. 12th st., N. Y.
Burnett, W., Gunnison, Col.
Burns, M. & Cite, Leavenworth, Kan.
Burns, T. H., 201 Commerce st., Newark, N. J.
Burnstine, H., 407 Spear st., San Francisco, Cal.
Burpee, T. B. C., 1628 N. 9th st., Phila., Pa.
Burr & Houston, 37 Franklin st., B'klyn, N. Y.
Burr & Richmond Foundry Co., 57 Sandford st., B'klyn, N. Y.
Burton, F., Walhonding, O.
Burton Mfg. Co., Burton, O.
Busch, B., Columbus, Ind.
Bush, G. W. & Son, Ionia, Mich.
Bush Hill Iron Works, N. 16th, c. Buttonwood st., Phila., Pa.
Bush, P. P., Canton, O.
Butler, C., 24 Cliff st., N. Y.
Butler, D. E., Oak Shade, O.
Butler, R. H. & Co., Gainesville, Ga.
Butler, W., North Branch, Mich.
Butterworth & Lowe, Grand Rapids, Mich.
Buttman, J., Milan, O.
Cady, Glassbrook & Co., North Lansing, Mich.
Caleb, Fedder & Co., 1st av., above Fry st., Pittsburgh, Pa.
Calera Iron Works, Calera, Ala.
California Iron and Steel Co., San Francisco, Cal.
California Machine Works, 119 Beale st., San Francisco, Cal.
Calumet Foundry Co., 179 Dearborn st. (Room 9), Chicago, Ill.
Calumet Iron and Steel Co., 164 Dearborn st. (Room 212), Chicago, Ill.
Calvert Foundry and Mfg. Co., Calvert, Tex.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Cambridge Rolling Mills, Cambridgeport, Mass.
Camden Iron Works, Camden, N. J.
Camden Tool and Tube Works, Camden, N. J.
Cameron & Aiken, Butte City, Mon.
Campbell, A., Lyra, O.
Campbell, Andrew J., 553 W. 33d st., N. Y.

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Campbell, H. & Sons, Ironton, O.
Campbell, J. V., 1400 Aliceanna st., Balt., Md.
Campbell, McGugin & Co., Olive Furnace, O.
Campbell Mfg. Co., 126 Rebecca st., Allegheny, Pa.
Campbell & Vantassel, 553 W. 33d st., N. Y.
Campbell, Gardiner & Sons, 246 Oregon st., Milwaukee, Wis.
Canady, W. E., Mfg. Co., Rochester, Minn.
Camden Iron Works, Camden, N. Y.
Cannon, E., Big Rapids, Mich.
Cannon Iron Co., 216 S. 4th st., Phila., Pa.
Cannonsburgh Iron and Steel Co., 6th av., c. Smithfield st., Pittsburgh, Pa.
Cantine, J. & Co., Schenectady, N. Y.
Canton, F. E., San Jose, Cal.
Capital City Stove Works, Columbus, O.
Carbon Iron Co., 32d and Smallman sts., Pittsburgh, Pa.; 15 Broad st., N. Y.
Carlin's, Thos. Sons, Lacock, c. Sandusky st., Allegheny, Pa.
Carlisle Iron Works, Carlisle, Pa.
Carlisle, J. A., Newtown, Kan.
Carnegie Brothers & Co. (Ltd.), 48 5th av., N. Y.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., N. Y.
Carnell, Wm., Glassborough, N. J.
Carpenter, J. O., 390 Hudson st., N. Y.
Carpenter, L. D., Brush Creek, Ia.
Carpenter, S. M., 202 Merwin st., Cleveland, O.
Carpenter & Bowen, 85 Acorn st., Providence, R. I.
Carr & Smith, Camden, N. J.
Carrie Furnace Co., 706 Penn av., Pittsb'gh, Pa.
Carroll & Johnson, Portland, Ore.
Carter, T., Central City, Dak.
Carter, W. T. & Co., 302 Walnut st., Phila., Pa.
Carter, Allen & Co., Tamaqua, Pa.
Carter & Stevenson, Lynchburg, Va.
Carthage Foundry & Machine Co., Carthage, Mo.
Cartwright, McCurdy & Co., Youngstown, O.
Car Wheel Iron Co. (Ltd.), 400 Chestnut st., Phila., Pa.
Cassidy, J. & Son, Aurora, Ill.
Cassidy & Adler, 531-539 W. 55th st., N. Y.
Cassin, I. S. & Co., Gtn., Germantown av., c. 2d st., Phila., Pa.
Castle & Leary, St. Paul, Minn.
Catasauqua Mfg. Co., 224 S. 4th st., Phila., Pa.
Catchpole, A. & Co., Geneva, N. Y.
Cavert & Mallory, Sterling, Ill.
Cayuta Wheel & Foundry Co., Waverly, N. Y.
Cedar Rapids Foundry & Machine Co., Cedar Rapids, Ia.
Center Furnace, Ironton, O.
Central Forge Works, 100 Beekman st., N. Y.
Central Iron Foundry, 443 S. Central st., Balt., Md.; 202 Border st., E. Boston, Mass.; S. 11th st., c. Kent av., B'klyn, E. D., N. Y.; Salem, Mass.; Mansfield, Mass.
Central Iron Works, Helena, Ala.; 2014-2028 S. 3d st., St. Louis, Mo.; 203 E. 30th st., N. Y.
Centralia Iron and Nail Works, Centralia, Ill.
Centre Foundry, Wheeling, W. Va.
Chalgren & Bergman, Cannon River Falls, Minn.
Champlain Foundry & Machine Shop, Champlain, N. Y.
Chamberlin, H. G., & Co., Hudson, Mich.
Chamberlin Stove Co., 119 Hunt st., Cincinnati, Ohio.
Chambers Bros., Wixom, Mich.
Chambers, Bro. & Co., 52d st., bel. Lancaster av., Phila., Pa.
Chandeler, J. A. & Son, Monticello, Ia.
Chariton Iron Works, Chariton, Ia.
Charlotte Iron Works, 306 Powers Bldg., Rochester, N. Y.
Chartiers Iron and Steel Co. (Ltd.), 8 Wood st., Pittsburgh, Pa.
Chateaugay Ore and Iron Co., 21 Cortlandt st., N. Y.
Chattanooga Brass Foundry, Chattanooga, Tenn.
Chattanooga Iron Co., Chattanooga, Tenn.
Chelmsford Foundry Co., 131 Portland st., Boston, Mass.
Cheney, G. W. & Son, 447 E. 136th st., N. Y.
Cheney & Hewlett, 201 B'way, N. Y.; 116 Greene st., B'klyn, N. Y.
Chenoweth, W. H. & Son, 76 W. Munroe st., Chicago, Ill.
Cherry, W. H. & Co., Barton, Ala.
Cherry Valley Iron Works, Leetonia, O.
Chesapeake Iron Furnace, Clinton st., n. 8th av., Balt., Md.
Chestnut Hill Iron and Ore Co., 52 Wall st., N. Y.
Chicago Die and Machine Works, 91 W. Lake st., Chicago, Ill.
Chicago Forge and Bolt Co., 234 S. Clark st., Chicago, Ill.
Chicago Foundry Co., Redfield, s. w. c. Stein st., Chicago, Ill.
Chicago Malleable Iron Co., 26th st., n. w. c. Western av., Chicago, Ill.
Chicago Steam Boiler and Engine Works, 62 Michigan st., Chicago, Ill.
Chicago Wrought Iron Works, 207 S. Canal st., Chicago, Ill.
Chickies Iron Co., 224 S. 4th st., Phila., Pa.
Chillicothe Foundry and and Machine Works, Chillicothe, O.
Chouteau, Harrison and Valle Iron Co., 204 N. 3d st., St. Louis, Mo.
Christian, F., Iowa Falls, Ia.
Christie, J., Brandon, Vt.
Christopher & Simpson Architectural Iron and Foundry Co., 9th st., c. Park av., St. Louis, Mo.
Chulasky Furnace, 234 S. 4th st., Phila., Pa.
Cincinnati Foundry, 2 Lawrence st., Cincinnati, O.
Cincinnati Stove Works, 146 E. Front st., Cincinnati, O.
City Foundry, Holyoke, Mass.
City Foundry, Vallejo, c. Sansome st., San Francisco, Cal.
City Foundry and Machine Works, Belleville, Ill.
Clapp, C. E., Northampton, Mass.
Clapp & Co., Concord, N. H.
Clarage, T. & Sons, Kalamazoo, Mich.
Clare, J. D. & Co., Bloom Switch, O.; Portsmouth, O.
Clare, Duduit & Co., Portsmouth, O.; Rempel, O.
Clark, C., Kalamazoo, Mich.
Clark, J., Tchoupitoulas, c. Race st., New Orleans, La.
Clark, L., West Leipsic, O.
Clark Machine Co., Turner's Falls, Mass.
Clark Mfg. Co. (The), 424 to 428 Niagara st., Buffalo, N. Y.
Clark, Raffen & Co., Kingsbury, c. Ohio st., Chicago, Ill.
Clark, S. D. & Son, Ottawa, Kan.
Clark's, W. Son & Co., 33d and Charlotte sts., Pittsburgh, Pa.
Clark, W. & Co., Pittsfield, Mass.
Clark & Buck, Vincennes, Ind.
Cleveland City Forge and Iron Co., 101 St. Clair st., Cleveland, O.
Cleaveland, F. B., Chesterfield, Mass.
Cleveland Malleable Iron Co., Platt & C. & P. R. R., Cleveland, O.
Cleveland Rolling Mill Co., Nat'l Bk. Bldg., Cleveland, O.
Clifton Iron Co., Jenifer, Ala.
Cline & Co., York, c. Thompson st., Phila., Pa.
Clinton Bridge and Iron Works, Clinton, Ia.
Cobb, D. B., 154 Van Brunt st., B'klyn, N. Y.
Cobb's Iron and Nail Co. (The), Aurora, Ind.
Cocker, T. G., Gillinham st., n. Hedge, Fkd., Phila., Pa.
Codding, S. F., Hinckley, O.
Cogley, J., Emmet, Mich.
Cold Spring Iron Works, Norwich, Conn.
Cole, C. B., New Baltimore, O.
Cole Mfg. Co., Lake Village, N. H.
Cole, W. E., Washington, Ind.
Cole & Bro., Parkersburgh, W. Va.
Cole & Nichols, 10 Willie st., Lowell, Mass.
Cole & Son, Lebanon, N. H.
Coleman, H. D., Erato, n. Magnolia st., New Orleans, La.
Coleraine Iron Co., 302 Walnut st., Phila., Pa.
Coley, David L., Westport, Conn.
Collignon & Grinard, Perry, c. Washington st., Buffalo, N. Y.

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Collins, C. D., Alexandria, Va.
Collins, H. E., & Co., 34 Lewis Blk., Pittsburgh, Pa.
Colt, Meese, San Francisco, Cal.
Colton, A. B., Franklin, Ind.
Columbia Foundry, 133 Beale st., San Francisco, Cal.
Columbia Iron Foundry, 354 N. Halsted st., Chicago, Ill.
Columbus Iron Works, Columbus, Ga.
Columbus Machine Co., Columbus, O.
Colvin, C., 37 Gold st., Worcester, Mass.
Colvin, E., Milton, Pa.
Colvin, J. A., 52 Jackson st., Worcester, Mass.
Colvin, T. H., 150 Cove st., Providence, R. I.
Colwell Iron Works, 549 W. 27th st., N. Y.
Columbian Iron Co., 133 La Salle st., Chicago, Ill.
Columbia Iron Foundry, 36 Front st., Chicago, Ill.
Columbia Iron Works, 218 S. 4th st., Phila., Pa.
Columbia Iron & Steel Co., 132 1st av., Pittsburgh, Pa.
Columbia Rolling Mill Co., 132 Nassau st., N. Y.
Columbus & Hocking Coal & Iron Co., Columbus, O.; Gore, O.; Nelsonville, O.
Composite Iron Works Co., 83 Reade st., N. Y.
Combs, T., Lambertsville, N. J.
Combs & Bowden, Freehold, N. J.
Cone, J. & Co., Marquette, Mich.
Conewago Iron Co., 224 S. 4th st., Phila., Pa.
Conklin, H. H., Eureka, Nev.
Connelly, J., Brookhaven, Miss.
Conover, L. V., 336 E. 29th st., N. Y.
Continental Works, West, c. Calyer st., B'klyn, N. Y.
Converse, A. W. & Co., Windsor Locks, Conn.
Cook, Francis, 407 W. 36th st., N. Y.
Cook, G., 2347 Butler st., Chicago, Ill.
Cook & Radley, 214 E. 37th st., N. Y.
Cooke, C. E., Alstead, N. H.
Cookson Iron Works, Kansas City, Mo.
Cooper, C. & G. & Co., Mt. Vernon, O.
Cooper, E. F., Mt. Gilead, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Cooper Mfg. Co., Mt. Vernon, O.
Co-operative Foundry Co., 13 Hill st., Rochester, N. Y.; 5th, c. Congress st., Detroit, Mich.
Cope, E. T. & Son, West Chester, Pa.
Copake Iron Works, Candor, N. Y.
Corbin, P. & F., New Britain, Conn.
Cordesman's, H. J. Sons, 137 W. 2d st., Cincinnati, O.
Corliss Steam Engine Co., Charles st. R.R. crossing, Providence, R. I.
Cornelia Furnace Co., Hawks, O.
Cornell, J. B. & J. M., 141 Centre st., N. Y.
Corns, J. & Son, Massillon, O.
Cornwall Bridge Iron Co., Cornwall, Conn.
Corser, F. A., Ware, Mass.
Crosby, J., 124 Greene st., B'klyn, N. Y.
Cosgrove, J., Pensacola, Fla.
Cottrell, C. B. & Sons, Westerly, R. I.
Couch, B. M., Northampton, Mass.
Council Bluffs Iron Works, Council Bluffs, Ia.
Coventry, W., 456 Market st., Newark, N. J.
Cox, Abram, Stove Co., 144 N. 2d st., Phila., Pa.
Cox, J. L., Rock Creek, O.
Cox, T. & Son, Denver, Col.
Cox & Bro., Paulsborough, N. J.
Crafts Iron Co., Greendale, O.
Cranberry Iron and Coal Co., 237 S. 3d st., Phila., Pa.
Crane Iron Co., 224 S. 4th st., Phila., Pa.
Crane, M. H. & Co., Urbana, O.
Crane, W. E. & Co., Owatonna, Minn.
Crane, W. W., Auburn, N. Y.
Crawford W. McCrinion, Brazil, Ind.
Creary, W. F. & J. E., Milton, Fla.
Crescent Iron Works, Pomeroy, O.
Creswell, David S., 814 to 818 Race st., Phila., Pa.
Creswell, Samuel J., 23d st., c. Cherry st., Phila., Pa.
Crews & Westbrooks, Danville, Va.
Creveling, Miller & Co., Danville, Pa.
Crichton, R. R., Parsons, Kan.
Crippen & Scoffield, Oscoda, Mich.
Crocker Bros., 32 Cliff st., N. Y.
Cross Bros. & Scheue, Wason, n. Lake st., Cleveland, O.
Cross & Weller, Saint John's, Mich.
Cruickshank, Moyer & Co., Danville, Pa.
Crowther & Rogers, St. Joseph, Mo.
Cumingore, H. S. & Son, Perrysville, Ind.
Cummings, Joseph, 45 Duane st., N. Y.
Cummings & Hosack, Fredericktown, O.
Cunningham, J. A., Sacramento, Cal.
Cunningham, R. W. & Co., New Castle, Pa.
Currier, H. A. & Bro., Almont, Mich.
Currier, Cyrus & Sons, 17 R. R. pl., Newark, N. J.
Curry, John & Son, 553 W. 54th st., N. Y.
Curtis, G., Ogdensburg, N. Y.
Curtis, P. S., Utica, N. Y.
Dagwell, J., Utica, N. Y.
Dame & Townsend Co., 76 John st., N. Y.
Dane, H., Colon, Mich.
Dane, L. J., Lawrence, Mich.
Danks & Bros., Arkansas City, Kansas.
Darrecott, H. P., Milford, N. H.
Dassell Mfg. Co., Dassell, Minn.
Daughton, J. B., 1212 D st., Washington, D. C.
Davenport & Treacy Co., Jersey City, N. J.
Davies Iron Works, Muskegon, Mich.
Davies & Thomas, Catasauqua, Pa.
Davis, C. D. B., 26 McWhorter st., Newark, N. J.
Davis, E., & Son, Lawrence, Mass.
Davis, Howe & Co., Salt Lake City, Utah Ter.
Davis & Bro., 62 Rutledge st., Brooklyn, N. Y.
Davis & Farnum Mfg. Co., Waltham, Mass.
Davis & Furber Machine Co., North Andover, Mass.
Dawson, J. I., Bro., Gray's Ferry rd. c. S. 29th st., Phila., Pa.
Dawson, J. W., Pontiac, Mich.
Day, H. K., Elyria, O.
Dayton, L. M., & Co., 184 W. 2d st., Cincinnati, Ohio.
Dean, J., East Bridgewater, Mass.
Dean, L., Utica, N. Y.
Dearborn Foundry Co., 1525 Dearborn st., Chicago, Ill.
De Bardelaben & Underwood, Birmingham, Ala.
Decatur Iron Felloe Wagon Co., Decatur, Ill.
Deeley, Roberts & Co., 507 W. 32d st., N. Y.
Deer, S., Pottsville, Pa.
Deering & Lyon, Beardstown, Ill.
De Forest, T. B., & Son, Huntington, Conn.
De Hart, C. A., 80 Adams, Newark, N. J.
Delamater, C. H., & Co., ft. W. 13th st., N. Y.
Delamater Iron Works, 21 Cortlandt st., N. Y.
Delaney Forge & Iron Co., 300 Perry st., Buffalo, N. Y.
Delaney, J., & Co., Fort Edward, Wis.
Delaware Iron & Coal Co., 224 S. 3d st., Phila., Pa.
Delvin & Hollaway, Henderson, Ky.
Demarce, A., Fairfield, Ia.
Demarest, D. D., Altaville and Angels, Cal.
De Muth, Williams & Co., St. Joseph, Mo.
Dennis, E. & Co., Jackson, Mich.
Densmore Bros., Red Wing, Minn.
Dent, W. & Son, Utica, N. Y.
Denver Foundry and Machine Co., Denver, Col.
De Pew & Co., St. Paul, Minn.
Detroit Bridge and Iron Works, Foundry, st., c. M. C. R. R., Detroit, Mich.
Detroit Iron and Brass Mfg. Co., Elmira, N. Y.
Detroit Iron and Furnace Co., 1 Newberry st., Detroit, Mich.
Des Moines Steam Boiler and Iron Works, Des Moines, Ia.
Deuscher, H. P., Hamilton, O.
Deralin, J. H., 181 Harrison st., Baltimore, Md.
Devoe, J. L., Parkersburgh, W. Va.
Diamond & Boardman, Flushing, N. Y.
Dideon, P., Greenville, Pa.
Diercks, G., Columbus, S. C.
Dighton Furnace Co., Dighton, Mass.
Dilley, G. M. & Co., Palestine, Tex.
Dilley Foundry and Machine Co., Tyler, Tex.
Dilts, F., Fulton, N. Y.
Dimond, J. G. & T., 209 W. 33d st., N. Y.
Dinsmore & Kastendike, 123 S. Howard st., Baltimore, Md.
Divens, W. H., Laurel, Md.
Dix, J. L. & S. B., Glens Falls, N. Y.

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Doetsch & Krall, 161 North av., Chicago, Ill.
Doig, R., Ravenna, O.
Dominion Bridge Co. (Ltd.), Toronto, Ont.
Donahoe & Finn, 46 Baronne st., New Orleans, La.
Donaldson, J., Newark, N. J.
Donaldson Bros., Mt. Clemens, Mich.
Donnelly, M. & Co., 543 Washington st., N. Y.
Donnelly & Howard, Lutter Creek, Cal.
Dorsey, D. & Son, Glenwood, Md.
Dougherty, J. B., 1716 Barker st., Phila., Pa.
Douglas, W. & B., 76 William st., Middletown, Conn.
Dover Iron Foundry, Dover, N. H.
Downing Bros., Rock Island, Ill.
Downs, W. A., Montour, Ia.
Drake, B. F., Salem, Ore.
Drake, J. C. & Co., Sturgis, Mich.
Drake, L. S. & A. L., Easton, Mass.
Draper, E. D., Norwood, Mass.
Draper, G. & Sons, Milford, Mass.
Drummond Mfg. Co., 1216 W. Main st., Louisville, Ky.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Duclos, J. M. & Co., ft. E. 104th st., N. Y.
Duever, Adolph, 29 S. Jefferson st., Chicago, Ill.
Duffin, Daniel, 2217 S. State st., Chicago, Ill.
Dumont, C. T., 109 E. Front st., Cincinnati, O.
Dunbar, Robert & Son, Mississippi, c. Perry st., Buffalo, N. Y.
Dunbar Bros., Glenwood, Mo.
Duncannon Iron Co., 122 Race st., Phila., Pa.
Duncan, J., Fort Edward, Wis.
Duncan, W. P. & Co., Bellefonte, Pa.
Durfey, E. A., Mitchell, Dak.
Duval, G. W. & Co., Norfolk, Va.
Dyett, J. & Co., Front st., c. Central av., Cincinnati, O.
Dymaceck & Uceny, 459 W. 18th st., Chicago, Ill.
Eagle Foundry, Columbus, O.
Eagle Foundry, Minneapolis, Minn.; Toledo, O.
Eagle Foundry Co., Belleville, Ill.; 600 S. Jefferson st., Chicago, Ill.
Eagle Iron Co., Oreton, O.
Eagle Iron Foundry, Salem, Mass.
Eagle Iron Works, Detroit, Mich.; Perry, c. Miss. st., Buffalo, N. Y.; Des Moines, Ia.; 252 262 Woodbridge st., W., Detroit, Mich.
Eagle Machine Co., Lancaster, O.
East Buffalo Foundry Co., N. Y. C. Belt line, n. Broadway, Buffalo, N. Y.
East River Iron Works, ft. E. 104th st., N. Y.
Eastman Machine Co., Troy, Vt.
Eastwood, Benjamin, Paterson, N. J.
Eaton, W. M. & Son, Memphis, Mich.
Eaton, Cole & Burnham Co. (The), 69 Water st., Bridgeport, Conn.
Eberhart, H. & Co., Portsmouth, O.
Ebert, W., 191 Magazine st., New Orleans, La.
Eby & Reist, Manheim, Pa.
Eclipse Iron Works, Centre, c. Winslow st., Cleveland, O.
Eddy's, R. M., Sons, 41 E. Indiana st., Chicago, Ill.
Edgerton & Francis, Palmer, Mass.
Edwards, Stevens & Co., Colchester, Vt.
Edwards & Haubtman, 22-28 S. Front st., New Orleans, La.
E. G. Blakslee Mfg. Co., 76-78 Centre st., N. Y.
Eichelberger, J. A. & E., Saxton, Pa.
Ellert & Ployer, 2600 Wenworth av., Chicago, Ill.
Elmendorf, W. T., Sayre, Pa.
Elnrich, C., Columbus, O.
Elba Iron and Bolt Co. (Ltd.), 605 Smithfield st., Pittsburgh, Pa.
Ell & Newman, Davenport, Ia.
Eliza Furnace Coal and Iron Co., Wellston, O.
Elkhart Iron Works, Elkhart, Ind.
Elk Rapids Iron Co., 205 La Salle st., Chicago, Ill.; Elk Rapids, Mich.
Ellicott, H. Wm. & Son, Jackson, c. West st., Balto., Md.
Ellicott, D. G., Houston, Mo.
Ellis Foundry Co., 63 Blackstone st., Boston, Mass.; Carver, Mass.
Ellis, M., Keene, N. H.
Ellis, W. A. & Co., 2305 Coral st., Phila., Pa.
Ellis & Lessig, Pottstown, Pa.
Ellison, W. & Son, 913 N. Main st., St. Louis, Mo.
Ely & Williams, 1232 Market st., Phila., Pa.
Emery & Co., Indianapolis, Ind.
Emery, J. W., Newfield, Me.
Empire Foundry, 135-143 Fremont st., San Francisco, Cal.
Empire Iron Works, 224-230 W. 30th st., N. Y.
Emporia Foundry and Machine Works, Emporia, Kan.
Englebach & Co., Leadville, Col.
Enos, Hill & Co., Gallipolis, O.
Enright, J., San Jose, Cal.
Enterprise Architectural Iron Works, 8th st., c. Park av., St. Louis, Mo.
Enterprise Foundry Co., 106 W. Main st. Rochester, N. Y.
Enterprise Hardware Co. (Ltd.), 233 Washington av., Allegheny, Pa.
Enterprise Iron Works, Carrollton, Ill.
Enterprise Machine Works, Fort, c. Beaubien st., Detroit, Mich.
Erie Basin Iron Works, 52 Elizabeth st., Brooklyn, N. Y.
Erie City Foundry, Erie, Pa.
Erie Forge Co., 224 S. 4th st., Phila., Pa.
Essex Iron Works, 53-57 N. J. R. R. av., Newark, N. J.
Esslar Bros., St. Peter, Minn.
Estabrook, R. & Son, 198 W. 2d st., S. Boston, Mass.
Estabrook, Ridley & Co., Newport, Ark.
Etna Iron Furnace, Pedro, O.
Etna Iron Works, Etna Ga.; New Castle, Pa.; Ironton, O.; N. E. c. 4th and Race sts., Cincinnati, O.
Eureka Co-operative Foundry Ass'n, 128 Gest st., Cincinnati, O.
Eureka Foundry, 122 S. Jefferson st., Chicago, Ill.; 129 Beale st., San Francisco, Cal.
Eureka Iron Co., 224 S. 4th st., Phila., Pa.
Eureka Iron Works, 319 Howard st., San Francisco, Cal.
Eureka Iron and Steel Works, 21 Newberry st., Detroit, Mich.
Eureka Steam Heating Co., 302 State st., Rochester, N. Y.
Evans, J., Trenton, N. J.
Evansville Foundry Ass'n, Evansville, Ind.
Everson, Hammond & Co. (Ltd.), 2d av., ab. 10th st. bridge, Pittsb'gh, Pa.
Everson, W. H. & Co., 605 Smithfield st., Pittsburgh, Pa.
Ewal Iron Co., Red River, Ky.: Clay, c. Water st., Louisville, Ky.
Excelsior Foundry Co. (The), Eggleston av. c. 3d st., Cincinnati, O.
Excelsior Iron Works, 100 N. Clinton st., Chicago, Ill.
Excelsior Sheet Metal Works, Keokuk, Ia.
Facey, E. J., Haverhill, N. H.
Fagan, J., 28 Powers st., Brooklyn, N. Y.
Fairall, T. L., & Son, Laurel, Md.
Fairhaven Iron Works, Fairhaven, Mass.
Falcon Iron & Nail Co., Niles, O.
Fales & Jenks Machine Co., Pawtucket, R. I.
Fallkill Iron Works, Poughkeepsie, N. Y.
Fall River Iron Works, Fall River, Mass.
Fannie Furnace, Shawnee, O.
Faribault Iron Works, Faribault, Minn.
Farmer's Choice Feed Mill Co., New Lexington, Ohio.
Farnley Iron Co. (Ltd.), 206 B'way, N. Y.
Farrar & Trefts, 56 Perry st, Buffalo, N. Y.
Farrell, C., Butte City, Montana.
Farrell Foundry & Machine Co., Ansonia, Conn.
Farrington, Hyatt & Co, Stockton, Cal.
Favorite Stove Works Co, 3d, c. Smith st., Cincinnati, O.
Fawcett, Wm., Springfield, Ill.
Fawcett & Son, Alliance, O.
Featherstone, J., 354 N. Halsted st., Chicago, Ill.
Ferdinand, C., & Bro., Paterson, N. J.
Ferdon, Samuel B., 129 W. 31st st., N. Y.
Ferguson, D., Starksboro, Vt.
Ferguson, J. B., & Co., Roanoke, Va.
Ferguson, Wm. (Estate of), Hoboken, N. J.

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Fieldhouse, Dutcher & Belden, 30 W. Monroe st., Chicago, Ill.
Filer & Stowell Co (The), Clinton, c. Florida st., Milwaukee, Wis.
Filley, L., Jr., Westport, Conn.
Filley, M. L., 287 River st., Troy, N. Y.
Fillmore av. Iron Works, Fillmore av. n. Clinton st., Buffalo, N. Y.
Finch & Co., Scranton, Pa.
Findlay, C. D., Macon, Ga.
Fischer Foundry & Machine Co. (The), S. 21st, c. Mary st., Pittsburgh, Pa.
Fischer, H. C., 234 Green st., B'klyn, N. Y.
Fischer, Kistner & Mynarik, 618 Blue Island av., c. W. 19th st., Chicago, Ill.
Fischer, Leaf & Co., 333 W. Jefferson st., Louisville, Ky.
Fischer & Lederle, 38 Larned st., E., Detroit, Mich.
Fisher Engine Foundry & Machine Works, 23d, 24th and Smallman sts., Pittsburgh, Pa.
Fisher, J. J., 91 Liberty st., N. Y.
Fisher & Bro., Macomb, Ill.
Fiske, J. W., 26 Park pl., N. Y.
Fitzgerald, J. H., Port Huron, Mich.
Fitzpatrick, P. H., 62 W. Washington st., Chicago, Ill.
Fitzsimmons & Co., 626 Broadway, Cleveland, O.
Flagg, A., Wichita, Kan.
Flagg, S. G. & Co., 19th st., c. Penna. av., Phila., Pa.
Fletcher, W. & A. Co., 266 West st., N. Y.
Flint & Walling Mfg. Co., Kendallville, Ind.
Flood, J. M., Decatur, Ill.
Florence Foundry & General Stove, Florence, N. J.
Flower, J. & Bros., Brush, c. Woodbridge st., Detroit, Mich.
Floyd, James, R., 539 W. 20th st., N. Y.
Focht, G., Hoboken, N. J.
Foley, J. W. & Co., 331 W. Front st., Cincinnati, Ohio.
Foley, M., Chillicothe, O.
Forbes, A. D., Rockford, Ill.
Forbes & Davis, Fairbury, Neb.
Ford, G. W., Bay City, Mich.
Ford, Wm. P. & Co., Concord, N. H.
Ford & Kimball, Concord, N. H.
Fort Collins Foundry & Machinery, Fort Collins, Col.
Fort Scott Foundry & Machine Works, Fort Scott, Kan.
Foss, J. & J. M., Fairfield, Me.
Foster, F. B., Earl, n. Dorr st., S. Boston, Mass.
Foster, Merriam & Co., 31 Cross st., Meriden, Conn.
Fostoria Foundry & Machine Works, Fostoria, Ohio.
Foundry & Machine Works, Lowell, Mass.
Foust & Elliott, Lock Haven, Pa.
Fox, B., 513 W. 34th st., N. Y.
Fox, J., 231 N. 15th st., Phila., Pa.
Fox & Ferris, Northfield, Minn.
Foxboro Foundry and Machine Co., Foxboro, Mass.
Fraley Bros., Emmitsburg, Md.
Francis, F. W., Calera, Ala.
Franklin Brass and Iron Works, San Francisco, Cal.
Franklin Furnace, 1 Pioneer Blk., Columbus, O.
Franklin Iron Works, 1st, c. Bergen st., E. N., N. J.; Chambersburg, Pa.
Franklin Machine Co., St. Charles st., Providence, R. I.
Fraser, A., Reno, Nev.
Fraser & Chalmers, c. N. Union st., Chicago, Ill.
Frazer & Jones Co., 126 W. Fayette st., Syracuse, N. Y.
Friberg, Chas. A., 140 E. 41st st., N. Y.; Driggs, c. N. 13th st., B'klyn, N. Y.
Frederick, H. H., 215 Tchoupitoulas st., New Orleans, La.
Frederick, B. T. & Co., Marshalltown, Ia.
Freeman, W. C., Louisiana, Mo.
Fremont Foundry and Machine Co., Fremont, Neb.
Frey & Motter, York, Pa.
Friedel, J., Chattanooga, Tenn.
Friend, J. W. & Co., W. Carson st., 35th wd., Pittsburgh, Pa.
Fritsch, F., McMicken av., Dunlap and Stark sts., Cincinnati, O.
Froelich, A. (Estate of), 42 Sandford st., B'klyn, N. Y.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Fuller Iron Works, 216 S. Main st., Providence, R. I.
Fuller and Warren Co., River, c. Monroe st., Troy, N. Y.
Fuller's, G. Sons, Hallowell, Me.
Fulton Foundry, 207 Fremont st., San Fran'co, Cal.
Fulton Iron Foundry, 21-27 Furman st., B'klyn, N. Y.
Fulton Iron Foundry Co., 228 Franklin st., Boston, Mass.
Fulton Iron Works, 2d, c. Carr st., St. Louis, Mo.
Fulton Iron and Engine Works, Woodbridge, c. Brush st., Detroit, Mich.
Fulton, S., 261 S. 4th st., Phila., Pa.
Furance, H., Lyra, O.
Gadsden Foundry and Machine Works, Gadsden, Ala.
Galusha, N. H., 93 Court st., Rochester, N. Y.
Gallagher, D. W., San Francisco, Cal.
Galveston Iron Goods Mfg. Co., Galveston, Tex.
Galveston Iron Works, Galveston, Tex.
Garcin & Sons, 294 Howard st., San Francisco, Cal.
Garden City Foundry and Iron Works, 271-277 E. 20th st., Chicago, Ill.
Gardner, J. W., Ashland, Pa.
Gardner, L. & Son, Lockport, N. Y.
Garrett, F. S. & R. D. McManigal, Union Furnace, O.
Garrison, A., Foundry Co., 10-12 Wood st., Pittsburgh, Pa.
Gates Iron Works, 50 S. Clinton st., Chicago, Ill.
Gaulbert, McFadden & Caskey, American, c. York st., Phila., Pa.
Gaylord, Cross & Spiers Co., Benedict, c. Meadow st., Waterbury, Conn.
Gaylord Iron Co., Wright, ft. of Iron st., Detroit, Mich.
George & Tweedale, Constantine, Mich.
Getchell, J. S. & Son, Houlton, Me.
Gerst Bros. Mfg. Co., 800-802 Cass av., St. Louis, Mo.
G. F. Warner Mfg. Co., 212-228 West st., New Haven, Conn.
Gibson, E., Jersey City, N. J.
Gibson, H. A. (Mrs. W. H.), Kalamazoo, Mich.
Gibson, Lee & Co., Chattanooga, Tenn.
Gibson, R., Cape May City, N. J.
Gill, Thompson C. & Co., Phila., Pa.
Gilbert, F., Hartland, Vt.
Gilbert, W. T., Winchester, Va.
Giles, D. & Co., Chattanooga, Tenn.
Giles & Clancy, Water, c. Golden Hill st., Bridgeport, Conn.
Gillett, H. & Son, Lake City, Minn.
Gilman, E. B. & A. J., Dansville, N. Y.
Gilman, R. H., Liberty, Me.
Gillmore & Co., 875-881 Pearl st., Cleveland, O.
Gilmour Bros., Norwich, Conn.
Gilson Furnace Co., Mansfield, Mass.
Ginther, J., B'way and Platt st., Buffalo, N. Y.
Girard Iron Co., Girard, O.
Glamorgan Co., Lynchburg, Va.
Glamorgan Iron Co., 261 S. 4th st., Phila., Pa.
Glasgow Furnace, Moxahala, O.
Globe Foundry, 41 E. Indiana st., Chicago, Ill.
Globe Foundry, 222 Fremont st., San Francisco, Cal.
Globe Foundry & Machine Works, Niles, O.
Globe Iron Co., Jackson, O.
Globe Iron Foundry, 41-45 Indiana st., Chicago, Ill.
Globe Iron Works, Elm, c. Spruce st., Cleveland, O.; 35 E. Indiana st., Chicago, Ill.
Globe Rolling Mill Co. (The), Pearl, c. Elm st., Cincinnati, O.
Gloucester Iron Works, 6 N. 7th st., Phila., Pa.; Gloucester, N. J.
Glover Bros., 4741 Paul st., F'k'd, Phila., Pa.

The numbers following names indicate page on which the firm advertises.

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Goddard, E., Mantua, O.
Goddard, T., Jersey City, N. J.
Godey & Strom, Hawthorn av., c. Rees st., Chicago, Ill.
Godwin, T. W. & Co., Norfolk, Va.
Golden Bros., Columbus, Ga.
Golden State & Miners (Inc.), 237 1st st, San Francisco, Cal.
Goodale & Robb, Pawnee City, Neb.
Goodell & Co., Waterville, Me.
Goodell & Waters, 1514 Hamilton st., Phila., Pa.
Goodrich, E., Erie, Pa.
Goodsell & Crawford, Ludington, Mich.
Gore Iron Co., Gore, O.
Gorry, W. M., Willimantic, Conn.
Goshen Iron Co., New Philadelphia, O.
Goshen Shifting Rail Co., Goshen, Ind.
Gosnold Mills, New Bedford, Mass.
Gould, E. & Eberhardt, 97-103 N. J. R. R. av., Newark, N. J.
Gould, H., Lexington, Mich.
Gould & O'Donnell, Mill City, Nev.
Graff, Bennett & Co., 938 N. 2d st., St. Louis, Mo.; 97 Water st., Pittsburgh, Pa.
Graff & Co., 123 6th st., Troy, N. Y.
Grafton Iron Co., Leetonia, O.
Graham, J., Newark, Cal.
Graham & Gilkey, Colebrook, N. H.
Grainger & Co., 10th, bet. Main st. and the river, Louisville, Ky.
Grand Rapids Iron Co., Grand Rapids, Mich.
Granger Foundry & Machine Co., 101 Gaspee st., Providence, R. I.
Graves, E. H., & Son, Streator, Ill.
Gray, B., Jackson, O.
Gray, E. N., & Co., Maine av. n. 3d st., Washington, D. C.
Gray, E. W., Middletown Springs, Vt.
Great Western Type Foundry, Kansas City, Mo.
Greenbaum's, Michael, Sons, 9 Canal st., Chicago, Ill.
Green, S., & Son, Des Moines, Ia.
Green, W. H., 34 S. 2d st., Phila., Pa.
Green & Linehan, Mill and Fkd. av., Frankford, Pa.
Greenslade Bros., Jackson c. Juneau st., Milwaukee, Wis.
Greenwald, I. & E., 248 E. Pearl st., Cincinnati, Ohio.
Greenwood, M., Canal c. Jackson st., Cincinnati, Ohio.
Gregg, A. R., Brattleboro, Vt.
Gretton, O. C., Ann Arbor, Mich.
Grey & Son, San Jose, Cal.
Grier, G. S., Milford, Del.
Griffin Foundry & Machine Works, Griffin, Ga.
Griffin Wheel & Foundry Co., 189 Dearborn st., Chicago, Ill.
Grimes, G. W., Bluffton, Ind.
Grinnell, E., 164 Devonshire st., Boston, Mass.
Grinnell & Borland, Newton Falls, O.
Groveland Foundry Co., Dighton, Mass.
Gunn & Pagin, Memphis, Tenn.
Gust Foundry & Machine Works, Paulding, O.
Gutenkunst, W. & Co., 263 Reed st., Milwaukee, Wis.
Guthie, T., Galva, Ill.
Guttenberger, W. Sacramento, Cal.
Haas, Francis S., & Son, Buschwick av. c. Scholes st., Brooklyn, N. Y.
Hackett & Rice, Atlanta, Ga.
Hafers, Christopher, 407 W. 37th st., N. Y.
Hagerstown Iron Works, Hagerstown, Balto., Md.
Hague, A., Nevada, Ia.
Haight & Clark, Pleasant, ab. N. Pearl, Albany, N. Y.
Haley, S., Ravenna, O.
Hall, C. J., Belfast, Me.
Hall, G. W., Lockport, N. Y.
Hall & Myer, Attica, O.
Halladay, J. C., 138 W. Lake st., Chicago, Ill.
Hallenberg, A., 56 Delord st., New Orleans, La.
Hallett, John, 96 W. Polk st., Chicago, Ill.
Hamden Furnace, Hamden Junction, O.
Hamilton Coke Furnace, Hanging Rock, O.
Hamilton Foundry, Main, c. Folsom st., San Francisco, Cal.
Hamilton Iron Foundry, John, c. Water st., Cincinnati, O.
Hand & Blumer, Moss Point, Miss.
Hanna Bros., Hopkinsville, Ky.
Happel, Adam, 198 Broome st., N. Y.
Hardenbrook & Co., Bath, N. Y.
Hardwicke & Ware, 294 Washington st., Buffalo, N. Y.
Harkins, T. B. & Co., Bristol, Pa.
Harlow & Kelsey, Windsor, Vt.
Harmar Foundry and Machine Co., Marietta, O.
Harney, H. C. & Co., Franklin and Dupont sts., B'klyn, N. Y.
Harrington, H., Oskaloosa, Ia.
Harris, F. M. & Sons, Covington, Ind.
Harris, Geo. P. & Bro., 64 W. Lake st., Chicago, Ill.
Harris, Z. T., Gainesville, Fla.
Harris & Winslow Co. (The), 99 W. Monroe st., Chicago, Ill.
Harrold, A. & Co., Columbiana, O.
Harrower, H. C., 223 Pearl st., Buffalo, N. Y.
Harry & Vaugen, Gibson, Ill.
Harsch, J. George, 60-62 Fairfield st., Chicago, Ill.
Hart, C. M. & J. B., Clarksburgh, W. Va.
Hart, H. G. & Co., Utica, N. Y.
Hart, Bailey & Co., Wilmington, N. C.
Hartford Iron Works Co., 219 State st., Hartford, Conn.
Hartman, N. W., Cardington, O.
Hartwell & Myers, Plattsburg, N. Y.
Harvey, A. & Son, 139-149 Wood st., Detroit, Mich.
Haselton Furnaces, Haselton, O.
Haselton Iron Works, Haselton, O.
Hasey, H. H., W. Bridgewater, Mass.
Hastings Engine & Iron Works, Hastings, Mich.
Hatton, D. & Sons, Zanesville, O.
Hauck & Comstock, Mechanicsburg, Pa.
Haugh, Ketcham Co. (Iron Works), 232 Clark st., Chicago, Ill.
Haven, J. L. & Co., 56 Plum st., Cincinnati, O.
Haverhill Iron Works, Haverhill, Mass.
Hawkins, Chas. H., 205 Phœnix Bldg., S.W. cor. Clark & Jackson sts., Chicago, Ill.
Hawkins, R. F. Iron Works, 200 Liberty st., Springfield, Mass.
Hawkridge & Donaldson, Hoboken, N. J.
Hay, E. C., 9 Alling st., Newark, N. J.
Hayden & Baker, Columbus, O.
Hayden, P. & Sons, Columbus, O.
Hayden, P., Sadlery Hardware Co. (The), 160 W. Long st., Columbus, O.
Hayes, G. B., 344 Exchange st., Buffalo, N. Y.
Haywood & Campbell, Selma, Ala.
Hazleton Iron Works, Hazleton, Pa.
Hazzard & Sheldon, Wabash, Ind.
Head's Iron Foundry, 105 Broad st., Utica, N. Y.
Heald, S. & Son, Barre, Mass.
Heald & Britton, 92 Thomas st., Worcester, Mass.
Healey Iron Works, 136 Driggs st., B'klyn, N. Y.
Hecla Architectural Bronze & Iron Works, 115 E. Monroe st. (Room 11), Chicago, Ill.; 216-218 W. 23d st., N. Y.
Hecla Iron & Mining Co., Ironton, O.
Hegewald, Chas. & Co., Water, bet. Pearl and Bank, New Albany, Ind.
Heid, W., Oberlin, O.
Helen Blast Furnace, Orbiston, O.
Helena Iron Works, Helena, Mont.
Helfenberger, W. & Co., Indianapolis, Ind.
Helmbacher Forge and Rolling Mills Co., Barton and DeKalb sts., St. Louis, Mo.
Heminger, Roemer & Nash, Bowling Green, Ky.
Henley & Meyer Engineering Co., Denver, Col.
Hercules Iron Works, N. Canal st., N. W. c. Carroll av., Chicago, Ill.
Hermance Bros., Kingston, N. Y.
Hess, Snyder & Co., Massillon, O.
Hess Stove Works, Van Buren, c. Franklin st., Chicago, Ill.
Hetherington & Berner, Indianapolis, Ind.
Hewes & Phillips Iron Works, Orange, c. Ogden sts., Newark, N. J.
Heywood Foundry Co., Gardner, Mass.
Heywood, Wilson & Co., Fitchburg, Mass.
Hicks & Griffin, Bellefonte, Pa.

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Higganum Mfg. Co., Haddam, Conn.
Higgins & Co., Cass City, Mich.
Highland Foundry Co., 89 North st., Boston, Mass.
Hilleman, H., 920 N. Front st., Phila., Pa.
Hill, R., Dalton, Ga.
Hill & Bosley, Winchendon, Mass.
Hillard & Sterritt & Co., Duquesne way, Pittsburgh, Pa.
Hillman, Buford & Corbett, Nashville, Tenn.
Hilton, B., Paterson, N. J.
Himrod Furnace Co., Youngstown, O.
Hirsch, Harry B., 271 B'way, N. Y.
Hislop, Mrs. T. T., Congress, c. 15th st., Troy, N. Y.
Hitzroth, C., 3126 Market st., Phila., Pa.
Hoagland, M., Rockaway, N. J.
Hocking Iron Co., Monday, O.
Hodge, C. J., Houghton, Mich.
Hodge Mfg. Co., Greenville, Pa.
Hodge, S. F. & Co., 320-326 Atwater st., Detroit, Mich.
Hodges, A. S., Chelsea, Mass.
Hodges, H. & Co., Norfolk, Va.
Hoefinghoff & Laue, 154 E. Front st., Cincinnati, Ohio.
Hoffman, J. M., Mullica Hill, N. J.
Hoffman, J. W. & Co., 208 S. 4th st., Phila., Pa.
Hogelin, S. L., Panora, Ia.
Hogue, A., & Sons, Rutland, O.
Hohsmann, I. A., 236 Magazine st., New Orleans, La.
Holbrook, L., Sandy Hill, N. Y.
Holden, E. F., & Son, 7 Onondaga av., Syracuse, N. Y.
Hollis, J., Elyria, O.
Hollister, G., Hanover, O.
Holmes, Pyatt & Co., 13 N. Jefferson st., Chicago, Ill.
Holmes, P. C., & Co., Gardiner, Me.
Holmgreen, G., San Antonio, Texas.
Holyoke Foundry Co., Holyoke, Mass.
Honeyman, J., & Co., Portland, Ore.
Hooper, E., Grand Island, Neb.
Hoosick Malleable Iron Works, Hoosick Falls, N. Y.
Hopedale Machine Co., Milford, Mass.
Hopkins, D. A., Jersey City, N. J.
Hopson & Chapin Mfg. Co., New London, Conn.
Horicon Iron Co., 24 Cliff st., N. Y.
Hort Blakely Mill Co., Seattle, Washington Ter.
Hoskin & Co., Marysville, Cal.
Hoskins & Hine, Highgate, Vt.
Hotchkiss, G. C., Field & Co., 624 E. 14th st., N. Y.
Houghton & Kniester, Toledo, O.
Howard, C., Hingham, Mass.
Howard, F. D., Akron, O.
Howard Furnace, Ironton, O.
Howard, G. C., 17 S. 18th st., Phila., Pa.
Howard Iron Foundry, Earl n. Dorr st., S. Boston, Mass.
Howard Iron Works, 285 Chicago st., Buffalo, N. Y.
Howard Iron Works, 461 Howard st., San Francisco, Cal.
Howard, A. S., Council Grove, Kansas.
Howard, Childs & Co., Pittsburgh, Pa.
Howe & Co., Owatonna, Minn.
Howell, W. H., & Co. (The), Geneva, Ill.
Howell & Co., Owosso, Mich.
Howell & Saxton, 353 Adams st., Brooklyn, N. Y.
Howlett & Tatem, Norfolk, Va.
Howenstine, D. J., Canal Fulton, O.
Hoyt, E. E. & W. V., Wayland, Mich.
Hoyt, W. J., Columbia, Pa.
Hoyt & Bro. Mfg. Co., Aurora, Ill.
Hoyt & Wynkoop, Spring av., Troy, N. Y.
Hoxsie Bros., Holloway Station, Mich.
Hubbell Stove Co., Terrace, c. Lock st., Buffalo, N. Y.
Hubbard, Bragg & Co., Oakland, Me.
Huber & Hartnett, 35 Liberty st., Albany, N. Y.
Huffman & Patterson, Decatur, Ind.
Humphrey, J. A., Bellefontaine, O.
Humphrey & Sons, Joliet, Ill.
Hunt & Ranslow, Minneapolis, Minn.
Hunter, James & Son, North Adams, Mass.
Huntington, Frank A., 45 Fremont st., San Francisco, Cal.
Hurlburt, W. M., Winona, Minn.
Huston, C. & Sons, Coatesville, Pa.
Huyett & Smith Mfg. Co., D. & M. Junction, Detroit, Mich.
Illinois Iron & Bolt Co., Carpentersville, Ill.
Illinois Iron Works, 172-174 Van Buren st., Chicago, Ill.
Illinois Malleable Iron Co., Diversey av., and C. & N. W. tracks, Chicago, Ill.
Illinois Malleable Iron Works, Lake View, Ill.
Inbody & Covell, Jefferson, Ia.
Indianapolis Foundry Co., Indianapolis, Ind.
Indianapolis Railroad & Pin Co., Indianapolis, Ind.
Indianapolis Rolling Mill Co., Indianapolis, Ind.
Indianapolis Steam Machinery Pipe Co., Indianapolis, Ind.
Industrial Iron Works, 233 Beale st., San Francisco, Cal.
Industrial Iron Works, Ludington, Mich.
Industrial Iron Works, 78 W. Monroe st., Chicago, Ill.
Inman, G. B., Wyandotte, Kan.
Innis Mfg. Co., Oil City, Pa.
Iowa Iron Works Co., Dubuque, Ia.
Iron Bay Mfg. Co., Marquette, Mich.
Iron City Foundry & Machine Works, Birmingham, Ala.
Iron Piling Co., 177 La Salle st. (Room 11), Chicago, Ill.
Iron and Steel Ass'n (The), Goshen, Va.
Irwin, W. H., 512 Liberty av., Pittsburgh, Pa.
Isold & DeHart, Red Oak, Ia.
Iverson, O. & Co., 194 West Indiana st., Chicago, Ill.
Ives & Bush Mfg. Co., Vicksburg, Mich.
Jack & Dover, Tuscarora, Nev.
Jackman, R. P. & Son, Elgin, Ill.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Jackson, B., 625 6th st., San Francisco, Cal.
Jackson Foundry and Machine Co., Jackson, Mich.
Jackson Iron Co., Fayette, Mich.
Jackson Iron Works, 814 Kearney st., San Francisco, Cal.
Jackson, J. L., Saginaw, Mich.
Jackson, J. W., Denver, Col.
Jackson, Wm. H., Rochester, Mich.
Jacob Bros., Avoca, Ia.
Jacob, T. B., Fostoria, O.
Jacquette, T., Uniontown, Pa.
Jagger Iron Co., Van Rensselaer st., Albany, N. Y.
James, C. E., Chattanooga, Tenn.
Jamestown Iron Works, Jamestown, N. Y.
Janney, H. H. & Co., Montgomery, Ala.
Jarboe, J. W. & Son, 519 E. 19th st., N. Y.
Jarvis & Bro., Huntington, W. Va.
Jefferson Foundry, 59 S. Jefferson st., Chicago, Ill.
Jefferson Iron Works, Steubenville, O.
Jenny & Manning, Washington C. H., O.
Jersey City Iron Works, Jersey City, N. J.
Jersey City Wheel Foundry and Machine Works, Jersey City, N. J.
Jewett, S. S. & Co., Perry, c. Miss. st., Buffalo, N. Y.
Jewett, T., Milford, Mich.
Johnson, B. & Co., Nashua, N. H.
Johnson Forge Co., Wilmington, Del.
Johnson Foundry and Machine Co., 541 E. 118th st., N. Y.
Johnson, I. G. & Co., Spuyten Duyvil, N. Y.
Johnson, J. & Co., 3971 Frankford av., Phila., Pa.
Johnson, J. H., Sons, Paducah, Ky.
Johnson, K., 122 S. Jefferson st., Chicago, Ill.
Johnson, L., Julia c. Water st., New Orleans, La.
Johnson, L. J., Reed City, Mich.
Johnson, W. C., Oskaloosa, Ia.
Johnson Bros., 215 Gold st., N. Y.
Johnson & Holt, Camden, N. J.
Johnson & Parker, Utica, N. Y.

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Joliet Iron & Brass Works, Joliet, Ill.
Jones, G. H., Sons, 158 Terrace st., Buffalo. N. Y.
Jones, J. E., Brown's race, ft. Furnace st., Rochester, N. Y.
Jones, J. V. & B. K., Hamburg, N. J.
Jones', L., Sons, 450 George st., Cincinnati, O.
Jones, R., Waynesburgh, O
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.
Jones, S. W., Union, Me.
Jones, T. C., Richmond, Va.
Jones & Abbott, Zanesville, O.
Jones & Laughlins (Ltd.), 3d av. c. Try st., Pittsburgh, Pa.
Jonson Foundry & Machine Co., ft. E. 118th st., N. Y.
Jordan, Wm. M., Lexington, Mo.
Josselyn & Webster, Lawrence, Mass.
Judd Mfg. Co., Wallingford, Conn.
Jupiter Iron Works, Davis, c. I. M. R. R., St. Louis, Mo.
Juragua Iron Co. (Ltd.), 208 S. 4th st., Phila., Pa.
Jurden, D., Ackley, Ia.
Junction Foundry Co., 65 Jackson st., Worcester, Mass.
Kabley, A., & Co., 56 Gold st., Worcester, Mass.
Kaestner, C., & Co., 305 S. Canal st., Chicago, Ill.
Kahn Bros., Hamilton, O.
Katahdin Iron Co., Bangor, Me.
Kauffman, J. G., Leesport, Pa.
Kauffman, G., & Co., Leavenworth, Kan.
Kaul, J. & A., St. Mary's, Pa.
Kaw Valley Iron Works Co., Kansas City, Mo.
Kearney & Co., Raleigh, N. C.
Kech, Gourneman & Co., Mt. Vernon, Ind.
Keeffe L., Thibodeaux, La.
Keen, B. L., 115 Dearborn st., Chicago, Ill.
Kehoe's Iron Works, Savannah, Ga.
Kehr & Duffy, 93 Washington st., Buffalo, N. Y.
Keller & Co., Wardensville, W. Va.
Kelley A. J., Kansas City, Mo.
Kelley, D. T., Portland, Me.
Kelly, H. D. & Co., 380 N. Water st., Chicago, Ill.
Kelly, M., Parkersburg, W. Va.
Kelly, W. D. & Sons, Ironton, O.
Kelly, Wm. E., New Brunswick. N. J.
Kellum, W. T., Dover, Del.
Kelly, Morgan & Co., Osage, Ia.
Kendeigh, J. E., North Amherst, O.
Kennebec Steam Iron Works, Gardiner, Me.
Kennedy & Greig, 3d, c. Congress st., Detroit, Mich.
Kenny & Co., Scottdale. Pa.
Kent, D. H. & Co. (Ltd.), 1009 Arch st., Phila., Pa.
Kent Iron Co., Kent, Conn.
Kentucky Belfonte Iron Works, Ashland, Ky.
Kentucky Iron, Coal and Mfg. Co., Ashland, Ky.
Kentucky River Iron Mfg. Co., Red River, Ky.
Kern, J., Jr. & Co., 112 W. Baltimore st., Balto., Md.
Kerr Murray Mfg. Co., Fort Wayne, Ind.
Key City Iron Works, Dubuque, Ia.
Keystone Iron Works, Reading, Pa.
Keystone Iron Works Co., Kansas City, Mo.
Keystone Mfg. Co., Rock Falls, Ill.
Keystone Rolling Mill Co. (Ltd.), 2d av., near Murphy st., Pittsburgh, Pa.
Kiechle & Harrison, Evansville, Ind.
Kilburn, Lincoln & Co, 13 Canal st., Fall River, Mass.
Killeen, T., 275 St. Louis st., New Orleans, La.
Kilner, J. C., York, Neb.
Kimball Bros., Lawrence, Kan.
Kimball's, G. Sons, Newburgh, N. Y.
Kimbark, S. D., Chicago, Ill.
King, A. C., Adrian, Mich.
King, A. S., Pontiac, Mich.
King, E. J, Terre Haute, Ind.
King, H. P., Osgood, Ind.
King Iron Bridge and Mfg. Co., Cleveland, O.
King Iron Works, 226 Ohio st., Buffalo, N. Y.
King, Gilbert & Warner, 1 Pioneer Blk, Columbus, O.
King & Andrews Co., 218 N. Union st., Chicago, Ill.
King & Co., Winchester, Ky.
Kingsford Foundry and Machine Works, Oswego, N. Y.
Kingsley, W. P., Lorain, O.
Kingston Co-operative Foundry Co., Kingston, Mass.
Kinsley Iron and Machine Co., Canton, Mass.
Kinzer & Jones, 107 Penn av., Pittsburgh, Pa.
Kirkpatrick & Co. (Ltd.), 8 Wood st., Pittsburgh, Pa.
Kirshman, H. L., Centerville, Ia.
Klein. Mathias, 89 W. Van Buren st., Chicago, Ill.
Kleinfelder, J. & Co., Muscatine, Ia.
Kling, A., Mobile, Ala.
Kling & Co., Gallipolis, O.
Knapp & Stewart, Nashville, Tenn.
Knecht & Brown, 195 Wade st., Cincinnati, O.
Knight & Co., Sutter Creek, Cal.
Knowlton Bros., Camden, Me.
Knowlton & Dolan, Logansport, Ind.
Knoxville Foundry and Machine Co., Knoxville, Tenn.
Knoxville Iron Co., Knoxville, Tenn.
Koeler, E., 45 Onega st., Milwaukee, Wis.
Kornegay, W. F. & Co., Goldsboro, N. C.
Kratz, G., Evansville, Ind.
Kratz Bros., Evansville, Ind.
Krieger & Burkhardt Co., 737-745 Central av., Cincinnati, O.
Krug, G. & Son, 415 W. Saratoga st., Baltimore, Md.
Kuchenbeiser, F. & Son, San Jose, Cal.
Kurtz Bros. & Buhrer, 822-830 Austin av., n. Western st., Chicago, Ill.
Laclede Foundry, 939 N. 2d st., St. Louis, Mo.
Laclede Rolling Mills, Ferry, n. Main st., St. Louis, Mo.
Lacy, J. J. & Co., 1400 Philpot st., Balt., Md.
La Grange Iron Co., 304 N. 8th st., St. Louis, Mo.
La Tourrette & Co., Middletown, O.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, O.; 52 B'way, N. Y.
Lake Mfg. Co., Ocean City, Newark, N. J.
Lakenan, J. M., Grass Valley, Cal.
Lake Shore Foundry, 347-349 Illinois st., Chicago, Ill.; ft. Alabama st., Cleveland, O.
Lakeside Iron Works (Webster Iron Co.), Marquette, Mich.
Lake Superior Iron Co., Ishpeming, Mich.
Lake Superior Iron Works, Houghton, Mich.
Lamb, J. C., Springfield, Ill.
Lambert Bros. & Co., Ironton, O.
Lamp, P. & Co., Davenport, Ia.
Lancaster Steam Radiator and Mfg. Co., Lancaster, Pa.
Lane Bros., Poughkeepsie, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Lane & Bodley Co., John, c. Water st., Cincinnati, O.
Lanesboro Iron Co., Lanesboro, Mass.
Langworthy, H. T., Middlebury, Vt.
Lanhoff, J. F. & W., Chene, c. Guion st., Detroit, Mich.
Lanigan, T. J., Eureka, Cal.
Lanning, C. E., Bridgeport, N. J.
Lanning, J., Psyk. av. & Federal & Eneu sts., Phila., Pa.
Lannon, Geo., Pueblo, Col.
Lansing Iron and Engine Works, Lansing, Mich.
Larkin & Varnum, Sharon, Vt.
Larrabee, H. C. & Co., Cardine, c. Lancaster st., Balt., Md.
Latta, F. H., Battlecreek, Mich.
Laufman, P. H. & Co., 543 Wood st., Pittsburgh, Pa.
Laughlin & Co. (Ltd.), 3d av., c. Troy st., Pittsburgh, Pa.
Lawrence, Anderson & Keener, Greenville, Cal.
Lawrence Foundry, Lawrence, Kan.
Lawrence Furnace Co., Culbertson, O.
Lawrence Iron Works Co., 4th, c. Main st. Cincinnati, O.
Lawrence & Barlow, Nevada City, Cal.
Lea, R., 1st av., c. Berry st., Pittsburgh, Pa.
Leatherland, J., Alexandria, Va.
Leavitt & Co., 72 Water st., Boston, Mass.
Lebanon Rolling Mill Co., Lebanon, Pa.
Le Baron Foundry Co., Middleboro, Mass.

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Lee, C. B. & Co, Galveston, Tex.
Lee, J. & Son, Cannelton, Ind.
Lee & Ealry, North Springfield, Mo.
Leeds & Co., Delord, c. Constance st., New Orleans, La.
Leesport Iron Co., Leesport, Pa.
Leetonia Foundry Co., Leetonia, O.
Lefferts, Marshall & Co., 54 Cliff st., N. Y.
Lehr Bros., Fremont, O.
Leishman & Snyder, 605 Smithfield st., Pittsburgh, Pa.
Leitelt, A., Grand Rapids, Mich.
Leland Iron Co., 12 Campan Bld'g, Detroit, Mich.
Le Mars Foundry and Machine Shop, Le Mars, Ia.
Lennox, Wm. & Co., Mattoon, Ill.
Leonard Co-operative Foundry Co., Taunton, Mass.
Leonard, G. H., Jefferson, O.
Lewis Foundry and Machine Co. (Ltd.), S. 10th, c. Muriel st., Pittsburgh, Pa.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Lewiston Foundry & Machine Co., Lewiston, Pa.
Levy & Lex, Duluth, Minn.
Licking Iron Co., Shawnel, O.
Licking Rolling Mill Co., Front, c. Vine st., Cincinnati, O.
Lincoln Iron Works, Rutland, Vt.
Lincoln Street Iron Foundry, 323-325 N. Lincoln st., Chicago, Ill.
Lincoln & Co., 54 to 70 Arch st., Hartford, Conn.
Lincoln & Dodge, ft. Alger st., Boston, Mass.
Lindsay, P., Church, ab. Hamilton st., Phila., Pa.
Lindsay & Early, Carbondale, Pa.
Lindsay & Graff, 622 E. 14th st., N. Y.
Lindsay & McCutcheon, 98 Rebecca st., Allegheny, Pa.
Lingle, T., Perth Amboy, N. J.
Linn Iron Works, Birmingham, Ala.
Linning & Jackson, Paducah, Ky.
Lisbon Foundry & Mfg. Co., Lisbon, Dak.
Liss, D. C., Jr., El Paso, Tex.
Little, Hughes & Rowe, 190 S. St. Paul st., Rochester, N. Y.
Little Rock Sheet & Galvanized Iron Works, Little Rock, Ark.
Livermore, F. D., Rochester, Minn.
Livingston & Co., 239 Washington av., A., Pittsburgh, Pa.
Lloyd, H. Son & Co., 1st av., n. Troy st., Pittsburgh, Pa.
Locke, L., Capac, Mich.
Locke, S. B. & Co., 6 Oliver st., Boston, Mass.; Somerville, Mass.
Lockhart, J. L., Bellefontaine, O.
Lockwood Mfg. Co., S. Norwalk, Conn.
Lookout Rolling Mill Co., Chattanooga, Tenn.
Logan Iron & Steel Co., 218 S. 4th st., Phila., Pa.
Longdale Iron Co., 237 S. 3d st., Phila., Pa.
Long & Co., 91 5th av., Pittsburgh, Pa.
Loomis, G. W., Adel, Ia.
Louisville Bridge & Iron Co., Louisville, Ky.
Love Bros., Aurora, Ill.
Love, Thos., Centre av., S.E. cor. 15th st., Chicago, Ill.
Lombard, G. R. & Co., Augusta, Ga.
Long, E., Iowa City, Ia.
Long Pond Foundry Co., Sprague, c. Harrison st., Providence, R. I.
Long, S. W. & Co., Owensboro, Ky.
Lord & Stone, Templeton, Mass.
Loring, H., c. 1st, n. M st., Boston, Mass.
Lotz, C., Lake View, Ill.
Loudon, R., Bloomington, Ill.
Louhardt, C., New Ulm, Minn.
Loughran & Hillis, Des Moines, Ia.
Louisville Iron Works, 123 10th st., Louisville, Ky.
Louisville Machine and Elevator Works, 717-733 E. Main st., Louisville, Ky.
Lounsbury, J. H., Westfield, Mass.
Lowell, A. H., Manchester, N. H.
Lowe, S. B., Chattanooga, Tenn.
Loynes, L. K., Pittsfield, Mass.
Lucy Furnaces, 48 5th av., Pittsburgh, Pa.
Ludington Iron Works, Ludington, Mass.
Lukens Rolling Mills, 112 John st., N. Y.
Luney Bros. & Co., Denison, Ia.
Lunciuda Furnace Co., 235 S. 3d st., Phila., Pa.
Lusk & Co., Jackson, Mich.
Luttgerding, H. C., North Branch, Md.
Lutzenberger, New Iberia, La.
Luzier & Co., Cambria, c. American st., Phila., Pa.
Lyle & Smith, Crawfordsville, Ind.
Lyman, H. W. & Co., Port Washington, Wis.
Lyman & Co., 319 Willings al., Phila., Pa.
Lynchburg Iron Co., 220 S. 3d st., Phila., Pa.
McAddle, Wm. & Co., Cadillac, Mich.
McAllister & McCone, Tombstone, Ari.
McAvoy & McFarline, Minneapolis, Minn.
McCallister, Wm. & Co., Clayton, N. J.
McCan, D. C. & Son, Fulton, bet. Notre Dame and Julia sts., New Orleans, La.
McClintock, T. & Son, Hillsboro, N. H.
McClure, D., Natchez, Miss.
McCollough Bros., Ypsilant, Mich.
McCollough Iron Co., 1600 Washington av., Philadelphia, Pa.
McConway & Torley Co., Liberty av., c. 25th st., Pittsburgh, Pa.
McCormick Bros., San Francisco, Cal.
McCowen, Patterson & Co., 119 Craven st., Phila., Pa.
McCullock, Calhoun & Co., Lena, Ill.
McCullough & Tate, Calais, Me.
McCully, R. C., Lancaster, Pa.
McCurdy & Warden, 276 West st., N. Y.
McDaniel & Harvey Co., 1600 Washington av., Phila., Pa.
McDonald, A. & Bro., Levee, c. Miller st., St. Louis, Mo.
McDonald & Co., Millersburg, O.
McDonald, J. K. & J. L., Columbus, O.
McDonald, Wm., Lapeer, Mich.
McDonough & Ballantine, Savannah, Ga.
McDonnell, J., Jackson, Miss.
McDougall & Potter, 608 W. 55th st., N. Y.
McElroy & Armitage, Keokuk, Ia.
McEntree, E., The Dalles, Ore.
McEntee & Dillon, Kingston, N. Y.
McFarland, R., Wichita, Kan.
McFarland, W., Indiana, Pa.
McFarland, Wm., Trenton, N. J.
McGee & Richet, Portland, Ore.
McGhee, J. M., Hawks, O.
McGonegal, J., Holly, Mich.
McGowen, A., Houston, Texas.
McGrath, R. M. & Co., La Fayette, Ind.
McGreery & Hagerty, 66 Michigan st., Chicago, Ill.
McGreevy & Hagerty, 66-68 Michigan st., Chicago, Ill.
McGuire, J., Sacramento, Cal.
McHugh & Dawson, 199-205 N. Halsted st., Chicago, Ill.
McHugh & Enright, 199-205 N. Halsted st., Chicago, Ill.
McIlavrey, J., 9 N. J. R. R. av., Newark, N. J.
McIlvain, W. & Sons, Reading, Pa.
McKaig, M., Cumberland, Md.
McKee & Anderson Steel Co. (Ltd.), 36 6th st., Pittsburgh, Pa.
McKeoun, C., Jefferson, Texas.
McKinney, J. & Son, 925 B'way, Albany, N. Y.
McKinnon Mfg. Co., Bay City, Mich.
Mackey & Co., South Haven, Mich.
McKnight, W., 102 Penn av., Pittsburgh, Pa.
McLagon Foundry Co., 26-30 Audubon st., New Haven, Conn.
McLanahan & Stone, Hollidaysburg, Pa.
McLaughlin, J., Lee, Mass.
McLeary, E. Jr., Toledo, O.
McMurray, C. F., 96 Commerce st., Hartford, Conn.
MacMurray-Judge Architectural Iron Co., Papine, n. 21st st., St. Louis, Mo.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
McNaughton & Daniels, 23 Lloyd st., Buffalo, N. Y.
McNeal, A. H., Burlington, N. J.
McNeil & Annis, McPherson, Kan.
McNelly & Guerich, Albia, Ia.
McShane, H. & Co., 415 North st., Balt., Md.

The numbers following names indicate page on which the firm advertises.

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Mackey, C. H., Jackson, Mo.
Mackintosh, Hemphill & Co. (Ltd.), 12th, c. Etna st., Pittsburgh, Pa.
Maclarne, Wagne & Co., Monroe, Mich.
Macon City Foundry Co., Macon, Mo.
Macungie Iron Co., 216 S. 4th st., Phila., Pa.
Madison Furnace, Portsmouth, O.; Rempel, O.
Magee Furnace Co., Chelsea, Mass.
Magnetic Iron Co, 216 S. 4th st., Phila., Pa.
Maher, Robinson & Flockhart, 86 Polk st., Newark, N. J.
Maher & Brayton, 20 Carter st., Cleveland, O.
Mahoning Valley Iron Co., Niles, O.; Youngstown, O.
Mahony, M., 85 Centre st., N. Y.
Maiden Creek Iron Co., 112 John st., N. Y.
Main St. Iron Works, 131 Main st., San Francisco, Cal.
Malleable Iron Fittings Co., Branford, Conn.
Malleable Iron Works, New Britain, Conn.
Mallory, W. S. & Co., 10 W. Randolph st., Chicago, Ill.
Maltby, A. H., Hutchinson, Kan.
Mampel, A. J., Bath, Me.
Manhattan Iron Works Co., ft. W. 143d st., N. Y.
Manistee Iron Works Co., Manistee, Mich.
Manly & Cooper Mfg. Co., 271 B'way, N. Y.
Mann, W., Martin's Ferry, O.
Manogue, J., Memphis, Tenn.
Mansfield & Fagan, Hoboken, N. J.
Mansfield & Stimson, Rutland, Vt.
Mar, J. I. & Bro., Jersey City, N. J.
March, W. H., S. 22d st., c. Wash'n av., Phila. Pa.
Marine Iron Works, 1015 Battery st., San Francisco, Cal.
Marinette Iron Works Co., 212 E. Lake st., Chicago, Ill.
Marion Machine Works, Palatine, W. Va.
Marinette Iron Works Co., 212 Lake st., Chicago, Ill.
Markham & Edwards, Frankfort, Mich.
Marshall Bros. & Co., 1215 Beach st., Phila., Pa.
Marshall Car & Foundry Co., Marshall, Texas.
Marshall Iron Co., 112 John st., N. Y.
Marshall Foundry & Construction Co. (Ltd.), 28th st. & R. R., Pittsburgh, Pa.
Marshall Iron Co., Newport, Del.
Marshall, J., & Co., 23 19th st., Pittsburgh, Pa.
Marshall, W. D., & Co., Main c. Florida st., St. Louis, Mo.
Marshutz & Cantrall, San Francisco, Cal.
Marston, C. E., Dover, N. H.
Martel Furnace Co., Saint Ignace, Mich.
Martens, W., 225 Tchoupitoulas, New Orleans, La.
Martin, S. E., Glencoe, Minn.
Martin, W. H., Santa Cruez, Cal.
Martin & Anderson, Yankton, Dak.
Martin & Reynolds, Covington, Ky.
Martin & Wester, Port Washington, Wis.
Marwick & Cummings, Grand Forks, Dak.
Maryland Folding Iron Gate & Guard Co., 2 W. Lexington st, Baltimore, Md.
Mason, Davis & Co., 73 Lake st., Chicago, Ill.
Mason Machine Works, Taunton, Mass.
Matteson & Williamson, Stockton, Cal.
Maumee Rolling Mill Co., Toledo, O.
May & Chapel, Pittsfield, Mass.
Maxted & Moors, Greenville, Mich.
Maxwell, Stillman & Evans, South av. c. Walker st., Allegheny, Pa.
Meadow Run Coal & Iron Co., Wellston, O.
Means, Kyle & Co., Hanging Rock, O.
Mechanics' Iron Co., 213 1st st., San Francisco, Cal.
Mechanics' Iron Foundry Co., Kemble, n. Hamden st., Boston, Mass.
Mecklenburg Iron Works, Charlotte, N. C.
Meeker-Austin, Norwalk, Conn.
Megow, F., Independence, Ia.
Mehlberger, P., Fort Smith, Ark.
Meier Iron Co., 102 N. Main st., St. Louis, Mo.
Meikle Plow Co., Monroe, bet. 11th and 12th sts., Louisville, Ky.
Melly, J. & R., Lebanon, Pa.
Meneely, G. R. & Co., Atlanta, Ga.
Menominee Iron Works, Menominee, Mich.
Menough, G. W., Wellsville, O.
Menze & Ferguson, Minneapolis, Minn.
Merion, Hertenstein & Co., Columbus, O.
Meroney & Bro., Salisbury, N. C.
Merrill, F. C., Paris, Me.
Merrimack Iron Foundry, Lawrence, Mass.
Merriman, C. D., Hinsdale, N. H.
Merriman & Barrett, Rome, N. Y.
Merion Iron Co. (The), 209 Walnut pl., Phila., Pa.
Mery, M. L., Chico, Cal.
Messenger & Mason, 347 E. Illinois st., Chicago, Ill.
Messmore & Brisbine, Spencer, Ia.
Mether, L. M. Carrollton, Mo.
Metropolitan Iron Co., 204 Townsend st., San Francisco, Cal.
Metropolitan Mfg. Co., Middlefield, Conn.
Meyer, A., 90 Forbes st., Pittsburgh, Pa.
Meyer & Schrage, Sheboygan, Wis.
Meyers, Fred. J. Mfg. Co. (The), 419-423 Madison av., Covington, Ky.
Michigan Iron Works Light and Power Co., Grand Rapids, Mich.
Michigan Malleable Iron Co., Woodbridge, bet. 18¼ and 20th sts., Detroit, Mich.
Michigan St. Iron Foundry, 66-68 Michigan st., Chicago, Ill.
Middleditch, P. & B., Petoskey, Mich.
Midland Blast Furnace Co., 304 N. 8th st., St. Louis, Mo.
Mietz, A., 89 Elizabeth st., N. Y.
Miles, F., Candor, N. Y.
Millard, D. W. & Co., Alliance, O.
Millard, J., Kingston, N. Y.
Miller, A. B., Stonington, Conn.
Miller, C. & Co., Grand Rapids, Mich.
Miller, J. W., Fort Madison, Ia.
Miller, W. G., Cockeysville, Md.
Miller Co. (The), Canton, O.
Miller Iron Co., 176 Harris av., Providence, R. I.
Miller, T. & Co., Muskegon, Mich.
Miller & Fernwood, Richmond, Mich.
Miller & Kaercher, Chelsea, Mich.
Miller & McCartys, Zanesville, O.
Millerton Iron Works, Millertown, N. Y.
Milliken Bros., 59 Liberty st., N. Y.
Mills & Austin, 176 Central way, Cleveland, O.
Millspaugh Bros., Williamsport, Pa.
Milmine, H. B. & Co., Toledo, O.
Milne, A. & Co., 26 Cedar st., N. Y.
Milton Furnace & Coal Co., Wellston, O.
Milwaukee Bridge and Iron Works, Towle, c. 18th st., Milwaukee Wis.
Minhennett & Withers, Tuscaloosa, Ala.
Minneapolis Iron Works, Minneapolis, Minn.
Mioaid, Lean & Crawford, Duluth, Minn.
Mish Bros., Lebanon, Pa.
Missouri Malleable Iron Co., Papine, nr. 21st st., St. Louis, Mo.
Mitchell, J., 56 Water st., Brooklyn, N. Y.
Mitchell, Pollock & Co., Jackson, O.
Mitchell & Shepherd, 2069 Marshall st., Phila., Pa.
Mitchell, Trauter & Co., 2d, c. Race st., Cincinnati, O.
Mixer, Geo. H., San Francisco, Cal.
Moer, G. H., West Unity, O.
Moerzinger, J., Lyons, Ia.
Moffit & Sees, Portland, Ind.
Moline Malleable Iron Co., Moline, Ill.
Monitor Furnace, Coal Grove, O.
Monongahela Mfg. Co., Monongahela City, Pa.
Montague Iron Works, Montague, Mich.
Montgomery Iron Co., 234 S. 4th st., Phila., Pa.
Montgomery Iron Works, Montgomery, Ala.
Montigel, J. M. & Co., Alma, Mich.
Montour Iron and Steel Co., Danville, Pa.; 216 S. 3d st., Phila., Pa.
Moore, A., Faribault, Minn.
Moore, G. G., Kansas City, Mo.
Moore, James, 16th, c. Buttonwood st., Phila., Pa.
Moore, O. D., Foundry Co., Kansas City, Mo.
Moore, S. L. & Son, Bayonne City, N. J.; Elizabethport, N. J.
Moore, T. J., Blossburg, Pa.
Moore, W., 173 Tchoupitoulas st., New Orleans, La.

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Moore & Alburges, Federalsburgh, Md.
Morgan Engineering Co., Alliance, O.
Morgan Iron Works, ft. E. 9th st., N. Y.
Morgan & Bassett, Appleton, Wis.
Moorhead Bros. & Co., 63 Anderson st., Allegheny, Pa.
Moorhead Foundry, Car & Agricultural Works, Moorhead, Minn.
Moorhead, McCleane Co., 16 W. Lake st., Chicago, Ill.; 104 Grant st., Pittsburgh, Pa.
Morris, L. M., Liberty, c. 23d st., Pittsburgh, Pa.
Morris, I. P. & Co., 2247 Richmond st., Phila., Pa.
Morris, Wheeler & Co., 1608 Market st., Phila., Pa.
Morris & Co., Columbus, O.
Morrissey Bros., Crookston, Minn.
Morrison, Colwell & Page, 253 River st., Troy, N. Y.
Morrison, H. T. & Co., Petersburg, Va.
Morrison, J. G., 22 Frost st., B'klyn, N. Y.
Morse, C. W., Huron, Dak.
Moseley Iron Bridge & Roof Co., 5 Dey st., N. Y.
Mossouri Valley Bridge & Iron Works, Leavenworth, Kan.
Motherwell Iron & Steel Co., Logan, O.
Mott, J. L., Iron Works (The), 307-309 Wabash av., Chicago, Ill.; 88-90 Beekman st., N. Y.
Moulton & Rempis, Grand Rapids, Mich.
Moultrop, J. C., Perrysville, O.
Mont Alto Iron Co , 407 Library st., Phila., Pa.
Mount Hope Iron Co., Somerset, Mass.
Mount Olive Iron Co., Rockaway, N. J.
Mount Sterling Iron Fence Foundry & Machine Co., Mount Sterling, Ky.
Mt. Vernon Furnace, Ironton, O.
Mowry Car Wheel Works, Eastern av., c. Lewis st., Cincinnati, O.
Muhl, A. & Co., Waco, Tex.
Muir, A., San Francisco, Cal.
Muir Mfg. Co., Minneapolis, Minn.
Munn & Anstice, 220-238 N. Water st., Rochester, N. Y.
Munnigal Bros., Webb City, Mo.
Munroe, D., 234 S. Jefferson st., Chicago, Ill.
Murliess, H. B., Rockville, Conn.
Murphy Iron Works, Congress, c. 3d st., Detroit, Mich.
Murray Iron Works (Inc.), Burlington, Ia.
Murray, P., 119 Craven st., Phila., Pa.
Murray & Stevenson, Anniston, Ala.
Musconetcong Iron Co., Stanhope, N. J.
Muth, Chas., 428 Blue Island av., Chicago, Ill.
Myrick Bros. & Co., Olean, N. Y.
Nashua Co-operative Iron Foundry Co., Nashua, N. H.
Nashua Iron Foundry, Nashua, N. H.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
Nashua Lock Co., Nashua, N. H.
Nation, J., Seattle, Wash. Terr.
National Iron Co., Main, c. Howard st., San Francisco, Cal.
National Iron Fence Co., 173 B'way, N. Y.
National Iron Works, New Brunswick, N. J.
Nauteue Iron Works, Duluth, Minn.
Naylor, Jacob, Girard av., c. Front st., Phila., Pa.
Naylor & Co., 99 John st., N. Y.
Neafie & Levy, Beach, c. Palmer st., Phila., Pa. **26.**
Nebraska City Foundry & Machine Shops, Nebraska City, Neb.
Needham Bros., Farmington, Minn.
Neemes Bros., 38 River st., Troy, N. Y.
Neil, J., Denver, Col.
Neill, J., Portsmouth, O.
Neil, J. & Co., 2614 Smallman st., Pittsburgh, Pa.
Nelsonville Foundry and Machine Co., Nelsonville, O.
New Albany Steam Forge, Water, n. Upper 6th st., New Albany, Ind.
New Bedford Iron Foundry, New Bedford, Mass.
Newcomb, W. F., 28 Factory st., Cleveland, O.
New England Butt Co., 31 Pearl st., Providence, R. I.
New Haven Rolling Mill Co., 26 Crown st., New Haven, Conn.
New Jersey Steel and Iron Co., 17 Burling sl., N. Y.
New York Central Iron Works, Geneva, N. Y.
New York and Ohio Iron and Steel Co., Ironton, O.
Nicol, Burr & Co., Peoria, Ill.
Nichols, E. S. & Co., Middlebury, Vt.
Nichols, Samuel & Son, 197 Wooster st., N. Y.
Nichols & Langworthy, Hope Valley, R. I.
Misson, H., 231 N. Frederick st., Baltimore, Md.
Nivers, E., Muscatine, Ia.
Noble Bros. & Co., Anniston, Ala.
Noble & Hall, Erie, Pa.
Noble Stove Co., Lynn, Mass.
Nobles & Sherlock, Canton, O.
Nolan, Madden & Co., Rushville, Ind.
North, A., Wanconda, Ill.
North American Iron Works, 40 Walton st., B'klyn, N. Y.
North Brooklyn Iron Works, 26 Rodney st., B'klyn, N. Y.
North Bros., 23d c. Race st., Phila., Pa.
North Fairfield Plow Co., North Fairfield, O.
North & Judd Mfg. Co., 500 E. Main st., New Britain, Conn.
North, O. B. & Co., 65 Franklin st., New Haven, Conn.
Northrop, Jasper A., New Milford, Conn.
North Star Iron Works Co., Minneapolis, Minn.
North Western Foundry, E. Fullerton av., n. N. W. R. R., Chicago, Ill.
North Western Foundry Phœnix Iron Works Co., Minneapolis, Minn.
North Western Malleable Iron Co., Park, c. W. Muskegon st., Milwaukee, Wis.
Norton, Campbell & Co., Gallia Furnace, O.
Norton, D. K. & Son, 2d, c. Elm st, Cincinnati, O.
Norton Iron Works, Ashland, Ky.; 3 Johnston Bldg., Cincinnati, O.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Nova Scotia Iron Co., 11 S. 3d st., St. Louis, Mo.
Novelty Iron Co., 117 Main st., San Francisco, Cal.
Novelty Iron Works, Canton, O.
Novelty Iron Works (Inc.), Dubuque, Ia.
Novelty Iron Works, Ottawa, Kansas.
Novelty Iron Works, Winona, Minn.
Novelty Machine Works, Evansville, Ind.
Novelty Mfg. Co., Denver, Col.; 291 Clinton st., Milwaukee, Wis.
Noyes & McCartney, Ashtabula, O.
Nunn, Neff & Warren, Salina, Kansas.
Nutter, G. W., Corinna, Me.
Nye Mfg. Co., Union City, Mich.
Nygren & Lindgren, 386 Throop st., Chicago, Ill.
O'Brien, J. C., 78 N. May st., Chicago, Ill.
Occidental, 137 1st st., San Francisco, Cal.
O'Donnell, P. N., Los Angeles, Cal.
Ogden, F. B., Republic, O.
Ogden & Wallace, 85 Elm st., N. Y.
Ohio Falls Iron Works, New Albany, Ind.
Ohio Furnace, Hanging Rock, O.
Ohio Iron Co., Zanesville, O.
Ohio Iron & Steel Co., Lowellville, O.
Ohio Machine Co., Middleport, O.
Ohio Stove Co., Portsmouth, O.; Tiffin, O.
Ohio & Western Coal & Iron Co., Monday, O.; Floodwood, O.
Olbrecht & Welder, Cedar Falls, Ia.
Old Colony Iron Co., Taunton, Mass.
Olds, M., Liverpool, O.
Olive Furnace, Ironton, O.
Oliver Bros. & Phillips, S. 11th & Muriel sts., Pittsburgh, Pa.
Olney, C. E., Columbiaville, Mich.
Omaha Enterprise Foundry, Omaha, Neb.
Oneco Mfg. Co., 43-49 Water st., New London, Conn.
Orange Coal and Iron Co., Sherodsville, O.
Orange Iron Foundry Co., Orange, Mass.
Orme, H., St. Paul, Minn.
O'Rorke & Co., Peoria, Ill.
Osborn, J. F. Bro. & Co., Clarksburgh, W. Va.
Osceola Foundry and Machine Shop, Osceola, Ia.
Osgood, J., Fort Edward, N. Y.
Osgood & Barker, Rockingham, Vt.

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Osgood & Hart, 3 Sherman st., Charlestown, Mass.
Osgood & Shumway, Batavia, Ill.
Oswald, M. J., Jeffersonville, Ind.
Otis Iron and Steel Co., 175 Dearborn st. (Room 24), Chicago, Ill.
Otis Iron and Steel Co., Lake, c. Lawrence st., Cleveland, O.
Ottumwa Iron Works, Ottumwa, Ia.
Outwater, J., 78 Smith st., Brooklyn, N. Y.
Over, E. Indianapolis, Ind.
Pacific Iron Co., 127 1st st., San Francisco, Cal.
Pacific Iron Works, E. Washington av., Bridgeport, Conn.
Packer, Wm. W., Saddle River, N. J.
Page, G. & Son, Saratoga, c. Jasper st., Baltimore, Md.
Page Steam Heating Co., N. Main st., Norwich, Conn.
Page & Sill, Franklin and Waterloo sts., Albany, N. Y.
Painter, J. & Sons, 96 Water st., Pittsburgh, Pa.
Palfey, F., Macon, Mo.
Palmer, C. C., Richmond, Va.
Palmer, C. F., Utica, N. Y.
Palmer, V. S., Kenduskeag, Me.
Palmer & De Mooy, Leonard, c. Winter st., Cleveland, O.
Pampel, H., Frederick, Md.
Pancoast & Rogers, 28 Platt st., N. Y.
Pankow Bros., Sioux Falls, Dak.
Pans, Frank, 852 Lincoln av., Chicago, Ill.
Parker, J. A., Terre Haute, Ind.
Parker, J. P., Ripley, O.
Parker, J. B., Machine Co., Clinton, Mass.
Parker & Topping, Brainerd, Minn.
Parkersburg Gas Co., Parkersburgh, W. Va.
Parsons & Landon, Hallett, c. Barnum st., Bridgeport, Conn.
Passaic Rolling Mill Co., 45 B'way, N. Y.
Patch & Swift, Wenona, Ill.
Paterson Iron Co., Paterson, N. J.
Paterson & Devol, Salem, Ore.
Patrick, D. K., Hinesburgh, Vt.
Patterson, R. R., Ludington, Mich.
Patterson Bros., East Liverpool, O.
Pattison, T. & Sons, Albany, Ga.
Paul, A. & Bro., Frostburgh, Md.
Paul, T. H. Son & Co., Frostburgh, Md.
Paxton, A. M. & Co., Vicksburg, Miss.
Paxton Rolling Mills, Harrisburg, Pa.
Payne, B. W. & Sons, Elmira, N. Y.
Peacock, G., Selma, Ala.
Peacock & Thomas, 242 S. 3d st., Phila., Pa.
Pearl River Foundry & Agricultural Works, Jackson, Miss.
Peckman, J. S. & M., Utica, N. Y.
Pederson, P. M., 181 N. May st., Chicago, Ill.
Pencoyd Iron Works, 112 John st., N. Y.; 251 S. 4th st., Phila., Pa.
Pendleton Foundry & Machine Works, Augusta, Ga.
Pendlington Iron Works, Elizabeth, n. Richards st., B'klyn, N. Y.
Peninsular Iron Co., ft. of Bellevue av., Detroit, Mich.
Penn Bridge Co., Beaver Falls, Pa.
Penn Iron Co., Lancaster, Pa.
Penn Iron & Coal Co., Canal Dover, O.
Pennock Bros., Minerva, O.
Pennock, C. E. & Co., Coatesville, Pa.
Pequest Iron Works, Oxford, N. J.
Perault, M. J., Fitchburg, Mass.
Perine & Hitchcock, Nashville, Tenn.
Perkins, H., Bridgewater, Mass.
Pero, P., 25 Hermon st., Worcester, Mass.
Perrotet, J., Columbia, Pa.
Peterson, F., 451 Reed st., Milwaukee, Wis.
Petit & Dripps, 14th, c. B st, Washington, D. C.
Pettingell, C. F. & Co., Amesbury, Mass.
Pettit, C. W., Norfolk, Va.
Pevey Bros., Lowell, Mass.
Pfeiffer, Jacob & Co., 93 W. Randolph st., Chicago, Ill.
Phelps, W. E. & Co., Elmwood, Ill.
Phœnix Foundry & Machine Works, Marietta, Ga.
Phœnix Iron Foundry, Elm, c. Eddy st., Providence, R. I.
Philadelphia Tool Co., 27th to 28th, on Oakford, bel. Federal st., Phila., Pa.
Phillips, Nimick & Co., W. Carson st., bel. Monongahela brdg., Pittsburgh, Pa.
Phœnix Foundry & Machine Co., 117 E. Water st., Syracuse, N. Y.
Phœnix Iron Co., 18 Fremont st., San Francisco, Cal.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Phœnix Iron Foundry, Wilmington, Del.
Phœnix Iron Foundry, 195 Wade st., Cincinnati, Ohio.
Phœnix Iron Works, Opelika, Ala.
Phœnix Iron Works, 54-60 Arch st., Hartford, Conn.
Phœnix Iron Works, Duluth, Minn.
Phœnix Iron Works, Columbus, S. C.
Phœnix Mfg. Co., Eau Claire, Wis.
Pickering, J. & Son, Richmond, Mo.
Pierce, E., 138 Mechanic st., Worcester, Mass
Pierce, H. A. & H. M., Ellsworth, Me.
Pierce Hardware Co., Rocky Hill, Conn.
Pine Grove Furnace, Hanging Rock, O.
Pioneer Hardware Casting Works, Minneapolis, Minn.
Pioneer Iron Co., 227 Main st., San Francisco, Cal.
Pioneer Iron Works, 149 Williams st., B'klyn, N. Y.
Piscataquis Iron Foundry, Foxcroft, Me.
Pittsburgh Forge and Iron Co., 10th st., n. Penn av., Pittsburgh, Pa.
Pittsburgh Mfg. Co., 38th, c. Railroad st., Pittsburgh, Pa.
Pittsburgh Rustless Iron Works, 32d and Smallman sts., Pittsburgh, Pa.
Pleiffer, A., San Francisco, Cal.
Plymouth Foundry Co., 63 Blackstone st., Boston, Mass.; Plymouth, Mass.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Pomeroy Iron Co., West Stockbridge, Mass.
Pomeroy Machine Co., Pomeroy, O.
Poole & Hunt, 7 German st., Baltimore, Mass.
Pope, Thos. J., & Bro., 292 Pearl st., N. Y.
Portage Iron Co. (Ltd.), Duncansville, Pa.
Porter Iron Roofing Co., 101 W. Front st., Cincinnati, O.
Porter Mfg. Co. (Ltd.), 354 N. Salina st., Syracuse, N. Y.
Portland Stove Foundry Co., Portland, Me.
Portsmouth Foundry & Machine Works, Portsmouth, O.
Portsmouth Iron & Steel Co., 13 Sycamore st., Cincinnati, O.
Portsmouth Machine Co., Portsmouth, N. H.
Potter, W. A., Spring Valley, Minn.
Potter, W. R., Taunton, Mass.
Pottsville Iron & Steel Co., 115 Dearborn st., Chicago, Ill.
Poughkeepsie Foundry, Poughkeepsie, N. Y.
Poughkeepsie Iron Works, Poughkeepsie, N. Y.
Poulson & Eger, N. 11th, c. 3d st., Brooklyn, N. Y.
Pound Mfg. Co., Lockport, N. Y.
Powel's, R. H., Sons & Co., 419 Walnut st., Phila., Pa.
Powell, A. C., & Son, 127 W. Fayette st., Syracuse, N. Y.
Pratt, G., Glastonbury, Conn.
Pratt, L., Carver, Mass.
Pratt Coal & Iron Co., Birmingham, Ala.; Helena, Ala.
Pratt Coal & Iron Co., Pratt Mine, Ala.
Pratt & Letchworth, 52-54 Terrace st., Buffalo, N. Y.
Pratt & Whitney Co., 1 Flower st., Hartford, Conn.
Pray Mfg. Co., Minneapolis, Minn.
Presbrey, C. H., & Co., Sterling, Ill.
Prescott, J. B., Dudley, Mass.
Presumpscot Iron Co., Portland, Me.
Proctor & Bamber, Mount Pleasant, Mich.
Progress Machine Works, Meridian, Miss.
Progressive Iron Works, 251 Greenpoint av., B'klyn, N. Y.
Prons Union Iron Works, Decatur, Ill.

The numbers following names indicate page on which the firm advertises.

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Providence Steam Engine Co., 373 S. Main st., Providence, R. I.
Providence Steel Works, Chattanooga, Tenn.
Puget Sound Iron Works, San Francisco, Cal.
Pullen & Son, Fowlerville, Mich.
Pullis, Bros., 206-208 N. 6th st., St. Louis, Mo.
Pullman, J. Wesley, 240 S. 3d st., Phila., Pa.
Putnam Foundry & Machine Corporation, Putnam, Conn.
Putnam Machine Co., Fitchburg, Mass.
Queen City Foundry Co., 602 W. 5th st., Cincinnati, O.
Queen City Iron Co., Gest st. and C. H. & D. R. R., Cincinnati, O.
Queen City Malleable Iron Co., 2d, c. Vine st., Cincinnati, O.
Quintard Iron Works, Av. D, 11th and 12th sts., N. Y.
Ralston, H. & J., 151 Beale st., San Francisco, Cal.
Ramapo Iron Works, Hillburn, N. Y.; 45 B'way, N. Y.
Ramsey, J., Pembroke, N. H.
Randle & Livermore, Memphis, Tenn.
Rankin, C. S. & Co., 185 W. Pearl st., Cincinnati, Ohio.
Rankin, Brayton & Co., San Francisco, Cal.
Rankin, W., Hayesville, O.
Rarig, A. K., Columbus, O.
Rawson, E., Elyria, O.
Rawson, S., Hornellsville, N. Y.
Raymond Furnace & Mfg. Co., South Norwalk, Conn.
Raymond, G. H., Westbrook, Me.
Raymond & Campbell, Middletown, Pa.
Read, W., Water, c. Jay st., B'klyn, N. Y.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rebman, G. & Co., Broad, c. Hamilton st., Phila., Pa.
Redman & Co., Wheeling, W. Va.
Redway & Burton, 9th, c. Harriet st., Cincinnati, Ohio.
Red Wing Iron Works, Red Wing, Minn.
Reed, J. B., Cairo, Ill.
Reed, J. C. & Co., Grant av., Pittsburgh, Pa.
Reedy, J. W. (Elevator Mfg. Co.), 83 Illinois st., Chicago, Ill.
Rees, D. W. Co., Canal Dover, O.
Rees, J., 4th st., c. Duquesne way, Pittsburgh, Pa.
Reese, A. H., Robinson, Ill.
Reese, D. M. & Sons, 1018 E. Fort av., Baltimore, Md.
Reese, F. W., Paris, Ill.
Reeves Iron Co., Canal Dover, O.
Reid, C. H., Danbury, Conn.
Reid & Cooper, Elmira, N. Y.
Relly & Son, Marengo, Ill.
Rennie, J. T., Cairo, Ill.
Republic Iron Works (Ltd.), ft. 25th st., South side, Pittsburgh, Pa.
Resor, W. & Co., State av., 22d Ward, Cincinnati, O.
Reynolds Iron Works, Fulton, c. Market st., New Orleans, La.
Reynolds & Lang, Ithaca, N. Y.
Rhode Island Malleable Iron Works, 564 Eddy st., Providence, R. I.; Warwick, R. I.
Rhodes & Dean, Kalamazoo, Mich.
Rice, D. E., 193 Atwater st., Detroit, Mich.
Rice, T. H., Oxford, Mich.
Rich & Vincent, Fort Dodge, Ia.
Richland Furnace Co., Richland, O.
Richmond Stove Co., Norwich, Conn.
Rick & Bros., Reading, Pa.
Ricker, T. H. & Sons, Harrison, Me.
Riddle, W. H., 181 Lacock st., Allegheny, Pa.
Ridge Valley Iron Works, Hermitage, Ga.
Ridgway, C. & Son, Coatesville, Pa.
Riemer, Fred., 130 W. Randolph st., Chicago, Ill.
Rightly, J., Wooster, O.
Riley, W. P., Williamsport, Pa.
Risdon Iron & Locomotive Works, Beale, c. Howard st., San Francisco, Cal.
Risdon, T. H. & Co., Mount Holly, N. J.
Risk, T. L. & Co., Memphis, Tenn.
Ristow & Wiese, Indianapolis, Ind.
Riverside Foundry Works, 26 Carter st., Cleveland, O.; 188 Liberty av., Pittsburgh, Pa.
Riverside Iron Works, 115 Dearborn st., Chicago, Ill.; 4th, c. Main st., Cincinnati, O.; Benwood, W. Va.; Wheeling, W. Va.
Rix, E. A. & Co., San Francisco, Cal.
Roane Iron Co., Chattanooga, Tenn.
Robbins, S. & Son, Beach, n. Vienna st., Phila., Pa.
Robbins & Meyers, Springfield, O.
Roberts Bros., Melvern, Kan.
Roberts & Co., A. & P., 261 S. 4th st., Phila., Pa.
Roberts & Langworthy, Dubuque, Ia.
Robertson, W. F. & Co., Marietta, O.
Robinson Iron Co., Plymouth, Mass.
Robinson, L. C. & Co., Scioto Furnace, O.
Robinson, W. S., Waterloo, Ia.
Robinson, Rea & Co., 134 Water st., Pittsburgh, Pa.
Robinson & Fowler Foundry Co., Plainfield, Conn.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Roby, S. J., 265 B'way, N. Y.
Rochester Foundry Co., Rochester, Pa.
Rockafellow, J. T., Maywood, Ill.
Rockhill Iron & Coal Co., 320 Walnut st., Phila., Pa.
Rockland Brass & Iron Foundry, Rockland, Me.
Rockwell & Sexton, Peabody, Kan.
Roder, P., 183 Newberry av., Chicago, Ill.
Rodney Hunt Machine Co., Orange Mass.
Roelker, J. H. & Co., Evansville, Ind.
Rogers, C. B. & Co., Norwich, Conn.
Rogers, J. & J., Iron Co, Au Sable Forks, N. Y.
Rogers Iron Mfg. Co., Muskegon, Mich.
Roheman, T. P., 30th, n. Chestnut st., Phila., Pa.
Roley, A., Basil, O.
Rollstone Iron Foundry, Fitchburg, Mass.
Romans & Cowle, Sonora, Cal.
Rome Foundry & Machine Works, Rome, Ga.
Rome Iron Works, Rome, N. Y.
Rome Merchant Iron Mill, Rome, N. Y.
Roney, J., 30 20th st., Pittsburgh, Pa.
Root, Neilson & Co., Sacramento, Cal.
Rose Bros., Chagrin Falls, O.
Rose City Iron Works, Little Rock, Ark.
Ross, D. S., Rochester, Ind.
Ross, E. W. & Co., Fulton, N. Y.
Rourck J., Savannah, Ga.
Rowell & Cross, Duplain, Mich.
Rowland, T. F., Calyer, c. West st., B'klyn, N. Y.
Rowland, J. & Co., 920 N. Del. av., Phila., Pa.
Royer Bros., 9th st., c. Montgomery av., Phila., Pa.
Rudge & Richardson, Port Huron, Mich.
Ruger, J. W. & Co., 222 Chicago st., Buffalo, N. Y.
Ruger, H., Poultney, Vt.
Ruhland, H. & Co., 1410 N. 22d st., Phila., Pa.
Rumsey & Kimble, Muir, Mich.
Rupp, F., 126 Polk st., Newark, N. J.
Russell, A. & Sons, Newburyport, Mass.
Russell, J. Q. A., Waverly, Ia.
Russell, Goodman & Co., Cedar Falls, Ia.
Russell Iron Works, Toledo, O.
Russell & Roberts, Paulina st., n. Blue Island av., Chicago, Ill.
Russell Wheel & Foundry Co., ft. Walker st., Detroit, Mich.
Rutland Foundry & Machine Shop Co., Rutland, Vt.
Rutz, E., Dixon, Ill.
Ryer, B. & Son, 42 Doughty st., B'klyn, N. Y.
Sabin, A., Leslie, Mich.
Sabin, A. J., Paw Paw, Mich.
Sadler, A. S., Linden, Mich.
Sager, F., 1546 Dickerman st., Cleveland, O.
St. Albans Foundry, St. Albans, Vt.
St. Joseph Iron Works, St. Joseph, Mich.
St. Louis Iron & Machine Works, Main st., c. Chouteau av., St. Louis, Mo.
St. Louis Malleable Co., 2108-2128 Market st., St. Louis, Mo.
St. Paul Foundry Co. & Grindrod, St. Paul, Minn.
Salem Foundry & Machine Shop, Salem, Mass.

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Salem Iron Works, Salem, N. C.
Salina Foundry, Salina, Kan.
Salsbury, H. H., Atlantic, Ia.
Salt Lake Foundry & Machine Co., Salt Lake City, Utah Terr.
Sammers, J., Flushing, Mich.
Sanderson, W. J., 27 W. Willow st., Syracuse, N. Y.
Sandke, Leopold, 179 Clybourn av., Chicago, Ill.
Sandstrom, A., & Co., Union Stock Yards, Ill.
Sandy Hill Iron & Brass Works, Sandy Hill, N. Y.
San Francisco, 203 Fremont st., San Francisco, Cal.
San Francisco Forge, 315 Misson st., San Francisco, Cal.
San Jose Foundry, San Jose, Cal.
Sarah Furnaces, Ironton, O.
Saugatuck Iron Works, Westport, Conn.
Savage Bros., 42-44 Michigan st., Chicago, Ill.
Savage, Son & Co., 135 Fremont st., San Francisco, Cal.
Saville, J. M. & Sons, Canton, Ill.
Saville, Wm. A & Bro., Astoria, Ill.
Scaffe Foundry & Machine Co. (Ltd.), 28th, c. Smallman st., Pittsburgh, Pa.
Scantlin, T. & Son, Evansville, Ind.
Schaeffer, Merkle & Co., Fleetwood, Pa.
Schellenbach, J., Effingham, Ill.
Schermer, F. & Co., 56 Met. av., B'klyn, N. Y.
Schermerhorn, W. S., Reading, Mich.
Schiefelbein, A., Holden, Mo.
Schillo, Cossman & Co., 87-95 W. Polk st., Chicago, Ill.
Schlosser, Rob't, 93 Hoffman av., Chicago, Ill.
Scioto Furnace Co., Scioto Furnace, O.
Schmidt, J. C., New Brunswick, N. J.
Schneider's, C. A. Sons, Washington, D. C.
Schoepflin, C. & Bro., Gardenville, N. Y.
Schofield, J. S. & Sons, Macon, Ga.
Schreiber, A. E. & Co., 140 N. Desplaines st., Chicago, Ill.
Schreyer, G., Columbus, O.
Schwab, Henry & Allen, 10 S. Water st., Rochcester, N. Y.
Scioto Machine Works, Circleville, O.
Scott Foundry, Reading, Pa.
Scott & Hague, 48 Fulton st., Chicago, Ill.
Scottdale Iron Works, 6th av., c. Smithfield st., Pittsburgh, Pa.
Scoville, H. H., 250 S. Clinton st., Chicago, Ill.
Scoville Iron Works, 250 S. Clinton st., Chicago, Ill.
Scoville & Russell, Waterbury, Conn.
Schroeder, C., Columbus, Neb.
Scuezhlt, Thurman & Co., Evansville, Ind.
Sears, L. F. S., Ashland, O.
Seaton & Lee, Lincoln, Neb.
Seevers, T., Oskaloosa, Ia.
Sedgwick & Stuart Mfg. Co., Poughkeepsie, N. Y.
Seidel & Hastings Co., 73 Christopher st., N. Y.
Selma, F., Machine Soap, Selma, Ala.
Sennett, G. B., Meadville, Pa.
Sering, Shangle & Son, Hightstown, N. J.
Sessions Foundry Co., Bristol, Conn.
Severin, J. & Sons, Aurora, Ind.
Seward & Co., Bloomington, Ind.
Seyfert, S. R., Reading, Pa.
Seyfert, S. & Co., Gibraltar, Pa.
Seylar, G. W. & Co., Hancock, Md.
Seyler, D. J., Ashland, Wis.
Seymour & Son, La Fayette, Ind.
Sexton, S. B. & Son, 23 E. Lombard st., Balt., Md.
Shafer, A. A. & Sons, Plymouth, Mich.
Shaffer, H. L., Foundry Co., 13th, c. Pike st., Pittsburgh, Pa.
Shaffer, J. W., Ottawa, Kan.
Shakespeare, S. & Co., Foundry, 219 Girod st., New Orleans, La.
Shangle, S. & Son, Hightstown, N. J.
Shapland, G., Seaward, Neb.
Sharon Valley Iron Co., Sharon, Conn.
Sharon Valley Malleable and Gray Iron Co., Sharon, Conn.
Sharp, T. & Co., Salem, O.
Sharp & Sons, New Philadelphia, O.
Sharpless, B. F., Bloomsburg, Pa.
Shaw, J. M., Water Valley, Miss.
Shaw, Kendall & Co., Toledo, O.
Sheffield Iron Works, 133 Conselyea st., B'klyn, E. D., N. Y.
Shelby Iron Co., 13 Johnston Bldg., Cincinnati, O.; Columbiana, Ala
Sheldon, G. L., New Marlboro, Mass.
Shelton, G. & Co., Metropolis, Ill.
Shenandoah Foundry, Shenandoah, Ia.
Shenandoah Iron Co., 132 Walnut st., Phila., Pa.
Shepard, A. S., Church, c. Jackson st., Buffalo, N. Y.
Shepard Hardware Co., Niagara st., c. Forest av., Buffalo, N. Y.
Shepard & Fletcher, Ashland, N. H.
Sheppard, Isaac A., & Co., Eastern av., c. Chester st., Baltimore, Md.
Sheppard, I. A., & Co., 4th, c. Montgomery st., Phila., Pa.
Sherman Co-operative & Machine Co., Sherman, Texas.
Shiawassel Iron Works, Owosso, Mich.
Shickle, Harrison & Howard Iron Co., 12th, n. Papin st., St. Louis, Mo.
Shields, G. A., Columbus, S. C.
Shiffler Bridge Works, Pittsburgh, Pa.
Shilling, Mrs. M. E., Columbus, O.
Shinnick, Woodside & Gibbins, Zanesville, O.
Shires & Jordan, Bedford, Pa.
Shoenberger, Geo. K., 62 Michigan st., Chicago, Ill.
Shoenberger & Co., 15th, c. Etna st., Pittsburgh, Pa.
Shorer & Taillee, 219 N. Water st., Rochester, N. Y.
Shower, W. H., & Bro., Westminster, Md.
Shriver, T., & Co., 333 E. 56th st., N. Y.
Sieg & Williams, Davenport, Ia.
Siegel, G., Carlinville, Ill.
Siegfried & Eby, Franklin, O.
Sill Stove Works, 210 Oak st., Rochester, N. Y.
Silver Lake Foundry Co., Olneyville, R. I.; 176 Harris av., Providence, R. I.
Simonds Mfg. Co., Mechanics' st., Norwalk, Conn.
Simons, C. P., & Bros., Cambridge, O.
Simpson, J., Huntington, Pa.
Simpson, J. S. & G. F., 26 to 36 Rodney st., Brooklyn, N. Y.
Simpson, T., Newark, O.
Sims & Morris, San Francisco, Cal.
Singer, Nimick & Co. (Ltd.), 83 Water st., Pittsburgh, Pa.
Sioux City Foundry & Machine Works, Sioux City, Ia.
Sioux Falls Foundry & Machine Co., Sioux Falls, Dak.
Skow, A. K., Newton, Ia.
Sligo Furnace Co., 411 Olive st., St. Louis, Mo.
Sloss Iron & Steel Co., Birmingham, Ala.
Smack, Robt., & Co., 237 Cherry st., N. Y.
Smalley Bros., Bay City, Mich.
Smart, P., Clio, Mich.
Smeeth, E., 28 N. Desplaines st., Chicago, Ill.
Smith, A., 73 N. J. R. R. av., Newark, N. J.
Smith, A. V., Laconia, N. H.
Smith, B., Shenandoah, Ia.
Smith, C., Warsaw, Ind.
Smith, E. R., Jackson, Mich.
Smith, G., Jersey City, N. J.
Smith, J. C., Jackson, Tenn.
Smith, M., Peru, Ind.
Smith, P. H., Peru, Ind.
Smith, S. D., York, c. Moyer st., Phila., Pa.
Smith, S. H., Beloit, Kan.
Smith, W. C., St. Albans, Vt.
Smith Bros, Monroe, Mich.
Smith Bros., Plymouth, c. Jay st., B'klyn, N. Y.
Smith Bros., Huntington, W. Va.
Smith Bros. & Watson, Portland, Ore.
Smith, D. B. & Son, New Hartford, Conn.
Smith & Haldeman Elevator Co., Toledo, O.
Smith, Hill & Co., Quincy, Ill.
Smith, G. & Co., Iola, Kan.
Smith, G. W. & F., Iron Co., 409 Federal st., Boston, Mass.
Smith & McCormack, 83 Noble st., B'klyn, N. Y.

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Smith & Sell, Winona, Minn.
Smith, Whitcomb & Cook, Barre, Vt.
Smith, Winchester & Co., Windham, Conn.
Smyser, E. G., 4 Light st., Balt., Md.; York, Pa.
Snapp, Mrs. F. R., Winchester, Va.
Snead & Bibb, 710 14th st., Louisville, Ky.
Snead & Co. Iron Works (The), 205 La Salle st. (Room 114), Chicago, Ill.
Snead & Co. Iron Works, 813 W. Market st., Louisville, Ky.
Snow, M. & Son, Paw Paw, Mich.
Snowden & Cowman, 9 W. Fayette st., Balt., Md.
Sohn & Rentschler, Hamilton, O.
Soho Iron & Steel Works, 16 W. Lake st., Chicago, Ill.
Solon, Hall, Painesville, O.
Somerset Co-operative Foundry Co., Somerset, Mass.
Soper Foundry Co., 68 E. Lake st., Chicago, Ill.
Soule, H., Rochester, N. H.
South Bend Iron Works, South Bend, Ind.
South Boston Iron Works, 57 Foundry st., Boston, Mass.
South Branch Foundry, 2347 Butler st., Chicago, Ill.
South Brooklyn Steam Engine Works, Summit, c. Van Brunt st., B'klyn, N. Y.
South End Foundry, Columbus, O.
South Halsted Street Iron Works, 2611 S. Halsted st., Chicago, Ill.
South Manchester Iron Foundry, Manchester, Conn.
South St. Louis Foundry Co., 121 Stein st., St. Louis, Mo.
Southern Ohio Coal & Iron Co., Wellston, O.
Southwark Foundry & Machine Co., Washington av., c. S. 5th st., Phila., Pa.
Spang, Chalfant & Co., 69 Sandusky st., Allegheny, Pa.
Sparrow, H., Hillsdale, Mich.
Spaulding Iron Co., Brilliant, O.
Spence, Baggs & Co., Martin's Ferry, O.
Spencer, A. L., Scranton, Pa.
Spencer's, I. S. Sons, Guilford, Conn.
Sperry, D. R. & Co., Batavia, Ill.
Spicers & Peckham, 22 Exchange pl., Providence, R. I.
Spier, T. R., Newburgh, N. Y.
Sprague & Co., Council Bluffs, Ia.; Glenwood, Ia.
Springfield Foundry Co., Springfield, Mass.
Springfield Foundry Co., Springfield, Mo.
Springfield Iron Co., Springfield, Ill.
Springfield Iron Co., 115 Dearborn st., Chicago, Ill.
Squier & Horner, Galion, O.
Stacey Mfg. Co. (The), 16 Ramsay st., Cincinnati, Ohio.
Stamford Foundry Co., Canal st., Stamford, Conn.
Standard Foundry Co., 1240 Collins st., St. Louis, Mo.
Standard Foundry and Mfg. Co., Herald st., c. Grand av., Cleveland, O.
Standard Iron Co., 46 E. Lake st., Chicago, Ill.; Bridgeport, O.; Monday, O.
Standard Iron Works, Minneapolis, Minn.
Standard Iron Works, Norristown, Pa.
Standard Machinery Co., Mystic River, Conn.
Standard Mfg. Co., 286 River st., Alleghany, Pa.
Standard Paint and Putty Works, Emlen, c. Thompson st., Philadelphia, Pa.
Stannard, E. & Son, 34 Artizan st., New Haven, Conn.
Star Foundry, 149 Washington st., Worcester, Mass.
Star Furnace Co., Jackson, O.
Starr Bros. Bell Co. (The), Chatham, Conn.
Starr Iron Works, 228 W. Pearl st., Cincinnati, O.
Staubach, Baldwin, 652 E. 12th st., N. Y.
Steams Mfg. Co., Erie, Pa.
Stearns, E. C. & Co., W. Adams, c. Oneida st., Syracuse, N. Y.
Stedman, N., Aurora, Ind.
Steel, Van Rossum & Co., 1631 N. 5th st., Phila., Pa.
Steele & Condit, 145 Broadway, N. Y.
Sterling Iron and Railway Company, Southfield, N. Y.
Sternbergh, J. H., Reading, Pa.
Steubenville Furnace and Iron Co., Steubenville, O.
Stevens, A., Ogden City, Utah Ter.
Stevens, J. & E. Co. (The), Cromwell, Conn.
Stevenson & Co., St. Cloud, Minn.
Stevenson, S. & Co., Wellsville, O.
Steward, W. P. & Co., 801 Washington av., Phila., Pa.
Stewart, Wm., Danville, Ill.
Stewart, W., Brattleboro, Vt.
Stewart, W. J., Seaford, Del.
Stewart & Bruckner, Nashville, Tenn.
Stiffer, Wm. H. & Bro., Norrisville, Md.
Stiglitz, C. G., 219 9th st., Louisville, Ky.
Stipe, G. & Sons, Minden City, Mich.
Stonewall Iron Works, Stonewall, Ala.
Stormount, Wm., Ottawa, Ill.
Storm Lake Foundry & Machine Works, Storm Lake, Ia.
Strait & Cadle, Stockton, Cal.
Straus, J. E., & Co., 45 Richmond st., Phila., Pa.
Strayman, J. M., Winfield, Kansas.
Streeter, H. A., 35 E. Indiana st., Chicago, Ill.
Streeter, H. R., Grand Ledge, Mich.
Strothman Bros., Minneapolis, Minn.
Strots, Lindburg & Co., Lindsborg, Kansas.
Stroud & Co., 104 John st., N. Y.
Struck, Albert, 100 S. Franklin st., Chicago, Ill.
Struthers, Wells & Co., Warren, Pa.
Stuart, Peterson & Co., 435 N. Broad st., Phila., Pa.
Stuarts, G., Litchfield, Minn.
Stuebner & Woods, 168-170 E. 3d st., Long Island City, N. Y.
Stuhr, Louis, 317 Howard st., San Francisco, Cal.
Suddith, C. J., Opelika, Ala.
Suffolk Iron Works, Armory, n. Centre st., Roxbury, Mass.
Suffrau, B., & Sons, Peebles, O.
Sullivan Machine Co., Claremont, N. H.
Sulzer & Vogt, 717 E. Main st., Louisville, Ky.
Summer, Margerum & Co., Niles, O.
Summers Bros., Hutchinson, Minn.
Swain, D. M., Stillwater, Minn.
Swain, G. W., Stillwater, Minn.
Swartz, C. K., Ackley, Ia.
Sweeney, A. J., & Co., Wheeling, W. Va.
Sweeney, M. A., & Bro., Jeffersonville, Ind.
Swenson, F., Cresco, Ia.
Swett, Quimby & Co., 219 River st., Troy, N. Y.
Swift's Iron & Steel Works, Newport, Ky.; 26 W. 3d st., Cincinnati, O.
Sylvester, C. O., Olathe, Kansas.
Syracuse Iron Works, Geddes, N. Y.
Syracuse Iron Works, W. Fayette, n. Magnolia st., Syracuse, N. Y.
Syracuse Malleable Iron Works, N. Geddes st., Geddes, N. Y.
Tacoma Foundry and Machine Co., Tacoma, W. T.
Talbot, W., Gaylordsville, Conn.
Talbott & Sons, Richmond, Va.
Talcott, N. W., Springfield, Mass.
Tamaqua Mfg. Co., Tamaqua, Pa.
Taplin, Rice & Co., Akron, O.
Tappey & Steele, Petersburg, Va.
Tarrant & Ramsay, 56 E. Indiana st., Chicago, Ill.
Tate & Freese, Plymouth, O.
Tatem, B. H., Helena, Mont.
Tatum, Samuel C., & Co., John, c. Water st., Cincinnati, O.
Taunton Iron Works Co., 87 Blackstone st., Boston, Mass.
Taunton Iron Works Co., Taunton, Mass.
Taylor, E. T., Franklin, N. H.
Taylor, M. C., Grass Valley, Cal.
Taylor Iron Works, High Bridge, N. J.
Taylor Iron Works, 91 Liberty st., N. Y.
Taylor Mfg. Co., New Britain, Conn.
Taylor & Boggis Foundry Co. (The), 65 Central Way, Cleveland, O.

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Taylor & Co., 66 Berry st., Brooklyn, N. Y.
Taylor & Forbes, Downieville, Cal.
Taylor, Wm. J., & Co., Chester, N. J.
Taylor, W. M., & Sons, 26 Adams st., Brooklyn, N. Y.
Tecumseh Iron Co., 18 Johnston Bldgs., Cincinnati, O.
Tennessee Rolling Works, Red River, Ky.
Terhune, R. P., Mfg. Co., Hackensack, N. J.
Terre Haute Iron and Nail Works, Terre Haute, Ind.
Terry, A. & Co., Plymouth Conn.
Texarkana Iron Works, Texarkana, Ark.
Thayer, O. A. & W. T., Charlestown, W. Va.
Theall, Horace, 67 Bethune st., N. Y
Thirlby & Jackson, Traverse City, Mich.
Thomas, J. E., Newark, O.
Thomas, R. O., Junction City, Kan.
Thomas Furnace Co., Niles, O.
Thomas Iron Co., 52 Wall st., N. Y.
Thomas & Albright, Goshen, Ind.
Thomas, Roberts, Stevenson & Co., 2d, c. Mifflin st., Phila., Pa
Thompson, C. B., Thomasville, Ga.
Thompson, L. P., Bordentown, N. J.
Thompson & Evans. 110 Beale st., San Francisco, Cal.
Thompson & Goss, St. Johnsbury, Vt.
Thorndale Iron Works, Thorndale, Pa.
Tifft's, G. W. Sons, & Co., 25 Washington st., Buffalo, N. Y.
Timmess, J., 281 N. 6th st., Brooklyn, N. Y.
Tinker & Son, Pine Run, Mich.
Titus, L. B., Coldwater, Mich.
Tod, W. & Co., Youngstown, O.
Todd, J. C., Paterson, N. J.
Toledo Foundry and Machine Co., Toledo, O.
Toledo Malleable and Gray Iron Works, Toledo, Ohio.
Toop, Geo. H., 406 E. 91st st., N. Y.
Topeka Iron Works, Salina, Kan.
Torrance, J., Chetopa, Kan.
Torrance, J. & Son, La Crosse, Wis.
Torrence Bros., Newton, Ia.
Torrey Roller Bushing Works, Bath, Me.
Totten & Co., 24th, c. Railroad st., Pittsburgh, Pa.
Tower, J. H., 48-52 Borden st., Providence, R. I.
Tower, R. J., Greenville, Mich.
Townsend Furnace and Machine Shop, B'way, c. Rensselaer st., Albany, N. Y.
Trask, E., Springfield, Mass.
Traud, A., 331 Terry st., Newark, N. J.
Treat, C. A., Hannibal, Mo.
Tredegar Iron Works, Richmond, Va.
Treman, Waterman & Co., Ithaca, N. Y.
Tremblay, P., Redford, N. Y.
Tremont Foundry Co., Hampshire, c. Culvert st., Boston, Mass.
Trenton Iron Co., Trenton, N. J.; 17 Burling sl., N. Y.; 21 N. 4th st., Phila., Pa.
Trimble, J. S., Shelby, O.
Trout, H. G. & Co., 226 Ohio st., Buffalo, N. Y.
Trowbridge, W., 47 Girod st., New Orleans, La.
Troy Architectural Iron Works, 5th, c. Liberty st., Troy, N. Y.
Troy Iron Works, Troy, Ala.
Troy Malleable Iron Co., 14th, c. Congress st., Troy, N. Y.
Troy Steel and Iron Co., Troy, N. Y.; 26 B'way, N. Y.
Trumbull Iron Co., Girard, O.
Tubbs & Humphreys, Cohoes, N. Y.
Tuckerman, Mulligan & Co., Saugerties, N. Y.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.
Tulloss, N. H. & Co., Iowa City, Ia.
Tunnicliffe, J. & Co., Belleville, Ill.
Turl, John & Sons, 534 W. 28th st., N. Y.
Turner, Dickinson & Co., 271-277 E. 30th st., Chicago, Ill.
Turner & Seymour Mfg. Co., Torrington, Conn.
Tuscaloosa Foundry Mfg. Co., Tuscaloosa, Ala.
Tustin, W. I., 308 Mission st., San Francisco, Cal.
Tuttle & Co., Butte City, Mont.
Twenty-ninth St. Iron Works, 110 29th st., Pittsburgh, Pa.
Union Brass & Iron Works, 105 Fremont st., San Francisco, Cal.
Union Foundry, Columbus, O.
Union Foundry Co., 224 S. 4th st., Phila., Pa.
Union Foundry & Machine Co., Rockford, Ill.; Catasauqua, Pa.
Union Foundry & Machine Works, Mansfield, O.
Union Foundry & Pullman Car Wheel Works, Pullman Bldg. (Room 212), Chicago, Ill.
Union Iron Co., ft. of Concord av., Detroit, Mich.
Union Iron Co., Millington, Mich.
Union Iron Co Works, St. Paul, Minn.
Union Iron Foundry, Lowell, Mass.
Union Iron Foundry, N. 2d st., c. Germantown av., Phila., Pa.
Union Iron Works, San Francisco, Cal.
Union Iron Works, Council Bluffs, Ia.
Union Iron Works, Kansas City, Mo.
Union Iron Works, Minneapolis, Minn.
Union Iron Works, Trenton, N. J.
Union Iron Works Co., Selma, Ala.
Union Malleable Iron Works, Moline, Ill.
Union Mfg. Co., New Britain, Conn.
Union Rolling Mill Co., 122 Water st., Cleveland, Ohio.
United States Iron and Tin Plate Co., 626 Liberty av., Pittsburgh, Pa.
Usher, Sav-Irgaoen Co., Lawrence, Kan.
Valentines & Co., Bellefonte, Pa.
Valley City Iron Works, Grand Rapids, Mich.
Valley Iron Works, Appleton, Wis.
Valk & Murdock, Charleston, S. C.
Van Bergen & Co., Carbondale, Pa.
Vanburen & Ryder, Carey, O.
Vance Iron Foundry Co., Jersey City, N. J.
Van De Sand & Clapp, Lebanon, Pa.
Van Riper & Rogers, Neosho, Mo.
Variety Iron Works, 4 Light st., Balt., Md.
Variety Iron Works Co., 51 Scranton av., Cleveland, O.
Variety Machine Co., Warsaw, N. Y.
Vaughan, A. H. & Sons, Norwich, Conn.
Vaughan, E. S. & Sons, 367 Bond st., Brooklyn, N. Y.
Vermont Snath Co., Springfield, Vt.
Vesuvius Iron Furnace, Pedro, O.
Veth, K., 609 E. Market st., Louisville, Ky.
Viaduct Foundry Co., 10 Centre st., Cleveland, Ohio.
Vienna Coal and Iron Co., Youngstown, O.
Vierling, McDowell & Co., Stewart av., c. 23d st., Chicago, Ill.
Virginia Nail and Iron Works Co., Lynchburg, Va.
Voss, E. & Co., East St. Louis, Ill.
Voth, H., Pekin, Ill.
Vulcan Brass and Foundry Co., New Castle, Pa.
Vulcan Forge and Iron Works, 803 Hamilton Bldg., Pittsburgh, Pa.
Vulcan Furnace Co., Newberry, Mich.
Vulcan Iron Works, John st., New Britain, Conn.
Vulcan Iron Works, 86 N. Clinton st., Chicago, Ill.
Vulcan Iron Works, Toledo, O.
Vulcan Iron Works, Oswego, N. Y.
Vulcan Iron Works, Wilkesbarre, Pa.
Vulcan Iron and Nail Works, Chattanooga, Tenn.
Vulcan Machine Co., Middleport, O.
Wagner, J. H. & Co., Vernon, Ind.
Wakefield, G. W. & Sons, Cherryfield, Me.
Wakeley, C. H., Southbury, Conn.
Walburn, A. W., Fort Scott, Kan.
Walker, C., Madison, Ind.
Walker, E., Clinton, Ill.
Walker, M., Fentonville, Mich.
Walker, T., Denver, Col.
Walker Mfg. Co., Lake Shore, ft. Waverly av., Cleveland, O.
Walker & James, Rushford, Minn.
Wallace, Banfield & Co. (Ldt.), 106 3d av., Pittsburgh, Pa.
Wallace, Wm. H. & Co., 131 Washington st., N. Y.
Wallis Iron Works, 15 Morris st., Jersey City, N. J.; 95 Cortlandt st., N. Y.
Walters, L., Newton Falls, O.
Walters Mfg. Co., Tamaqua, Pa.

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Walton, J. P. & Co., Harrison, c. Culvert st., Cincinnati, O.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, Ohio.
Walz, J. & Co., 863 Greenmount av., Baltimore, Md.
Warr, J. C. Wareham, Mass.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Warren, T., Flint, Mich.
Warren & Baker, Rich Hill, Mo.
Warren & McDonald, Alpena, Mich.
Washburn, A. W. & Son, Greenville, Pa.
Washington Mfg. Co., Washington, D. C.
Wason Mfg. Co., Springfield, Mass.
Wasson Car and Wagon Foundry, Chattanooga, Tenn.
Waterbury Farrell Foundry and Machine Co. (The), Waterbury, Conn.
Waters, W. L. & Son, Nashville, Tenn.
Watson Iron Works, 30 to 38 Knowlton st., Bridgeport, Conn.
Watson, James C., 235 E. Division st., Chicago, Ill.
Watson Machine Co. (The), Paterson, N. J.
Watson, T. A., Son & Co., Pomeroy, O.
Watts-Campbell Co. (The), 298 Ogden st., Newark, N. J.
Way Foundry Co., 23d, c. Wood st., Phila., Pa.
Weaver, N., Hudson, Mich.
Weaver, W. L., Boonville, Mo.
Webb, N. C. & Co., Fulton, Ky.
Webber, G. E., & Co., Medina, O.
Webster, Camp & Lane Machine Co., Akron, O.
Weed, W. A., 30 Astor House, N. Y.
Wehner, J., 76 Perido st., New Orleans, La.
Wehrfritz, E. C., Little Rock, Arkansas.
Weir, D. K., Montgomery, Ala.
Weiskittel, A., & Son, Aliceanna, c. Washington st., Baltimore, Md.
Weithe & Kattenbacker, Le Claire, Iowa.
Welch, J., Randolph, Vt.
Wells, Wm. H., & Co., 110 Cannon st., N. Y.
Wells & Kilpatrick, Bodie, Cal.
Wells & Whitney, Ithaca, Mich.
Wellston Foundry & Machine Co., Wellston, O.
Wellston Furnace, Wellston O.
Wellsville Plate & Sheet Iron Co., 111 Water st., Pittsb'gh, Pa.; Wellsville, O.
West, Geo., Harrington, Del.
West, Thomas D., Foundry Co., Wason st., Cleveland, O.
West Point Foundry, West Point, Ga.
West Point Foundry (The), Cold Spring, N. Y.
West Side Foundry Co., Cedar Rapids, Iowa.
Westbrook Foundry Co., Saccarappa, Me.; Westbrook, Me.
Western Forge & Rolling Mills, 210 N. 3d st., St. Louis, Mo.
Western Foundry & Machine Works, Salina, Kans.
Western Iron Works, 123 Beale st., San Francisco, Cal.
Western Penna. Bridge Works, 20th st., n. Penn av., Pittsb'gh, Pa.
Westervelt, A. B., & W. T., 102 Chambers st., N. Y.; 44 Jay st., B'klyn, N. Y.
Wetherell, R., & Co., Chester, Pa.
Wharton, J. S. L., Gtn. Junction, Phila., Pa.
Wheeler, Johnson & Co., Manistee, Mich.
Wheeler, H. B., Westport, Conn.
Wheeler, L. F., Bradford, Vt.
Wheeler, R., Son & Co, Utica, N. Y.
Wheeler, W. A., S. Norwalk, Conn.
Whitaker Iron Co., 4th, c. Main st., Cincinnati, O.
Whitaker, W., Hancock, Mass.
Whitaker, W. M., 52 N. Front st., Phila., Pa.
White, G., & Co., 462 Me. av., Washington, D. C.
White, Gleason & Co., Westernport, Md.
White, J. S., Pawtucket, R. I.
White & Tenny, Seattle, Wash. Ter.
Whitefield, Bates & Co., Clarksville, Tenn.
Whitmore, D., Bellevue, Ia.
Whitney, A. R., & Co., 17 Broadway, N. Y.
Whitney, D. B., Winchendon, Mass.
Whitney Iron Works Co., 181 Tchoupitoulas st., New Orleans, La.
Whyte & Overman, Washington, D. C.
Wiard, M., & Co., 43 Penn st., B'klyn, N. Y.
Wicker, J. C., Danville, Ill.
Wickes Bros., East Saginaw, Mich.
Wiggins & Simpson, Houston, Tex.
Wilbur, G. E., Mansfield, Mass.
Wilcox, W., Mfg. Co., Middletown, Conn.
Wilde & Co., Washington, Ia.
Wiles, A., Concordia, Kan.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Wilkenband Iron Fence and Screen Mfg. Co., Wilkesbarre, Pa.
Willard Sons and Bell Co., 138 E. Jackson st., Chicago, Ill.
Willcox & Thompson, 21-27 Furman st., B'klyn, N. Y.
Williams, C., Nashua, N. H.
Williams, G. W., & Son, Charleston, S. C.
Williams, H. D. & G. H., Dexter City, O.
Williams, White & Co., Moline, Ill.
Williams & Orton Mfg. Co., Sterling, Ill.
Williamsburgh Iron Foundry, Marcy, c. Hope st., B'klyn, N. Y.
Williamson, Geo. T., 107 Dearborn st. (Room 40), Chicago, Ill.
Williamson Iron Co., Birmingham, Ala.
Williamson, Samuel, 212-216 E. Front st., Cincinnati, O.
Williamsport Iron & Nail Works, 30 N. 4th st., Phila., Pa.
Willimette Iron Works, Portland, Ore.
Wilmington Malleable Iron Co., Wilmington, Del.
Wilmot & Hobbs Mfg. Co., Railroad, c. Hancock av., Bridgeport, Conn.
Wilson, J. B. & Co., Fort, c. 13th st., Detroit, Mich.
Wilson Mfg. Co., New London, Conn.
Wilson & McCool, Perrysville, O.
Wilson & Son, Greencastle, Ind.
Wilson & Waughn, Charles City, Ia.
Wilt, R. W. & Co., Macon, Ga.
Wiltse, B. & Co., Catskill, N. Y.
Winchester Wire & Iron Works, Winchester, Ind.
Wines, Wm. D., 44 Centre st., N. Y.
Wing, D. R. & Co., Little Rock, Ark.
Wingert, L., Montpelier, O.
Winona Iron Co., Winona Furnace, O.
Winship Machine Co., Atlanta, Ga.
Winslow Bros. Co., 101 W. Monroe st., Chicago, Ill.
Winsted Foundry & Machine Co., Winsted, Conn.
Winterhalter & Neil, Sand Beach, Mich.
Winter, F. W. & Co., Faribault, Minn.
Winterstein, J. & Son, Wabash, Ind.
Wiser & Acker, Greentown, O.
Wissart & Knapp, Abilene, Kan.
Wister, J., Salem, N. J.
Withers, T. R. & A., Marietta, Ga.
Witman Stove Co., Ironton, O.
Wittworth, G., Elkton, Md.
Wolgamuth & Oat, 917 Marshall st., Phila., Pa.
Wollaston Foundry Co., Quincy, Mass.; 50 Union st., Boston, Mass.
Wood, Alan & Co., 519 Arch st., Phila., Pa.
Wood, Bishop & Co., Bangor, Me.
Wood, J. & Bros., Co., 223 N. 2d st., Phila., Pa.
Wood, R. G., Nashville, Tenn.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.; Millville, N. J.
Wood, W. R., Foundry Co., West Troy, N. Y.
Wood, T. B. & Co., Chambersburg, Pa.
Wood, T. & Co., N. 22d, c. Wood st., Phila., Pa.
Wood, W. D. & Co. (Ltd.), 111 Water st., Pittsburgh, Pa.
Wood, W. H., Foundry Co., 46 William st., Troy, N. Y.
Wood, Wm. W., Wood's Falls, N. Y.
Woodcock, L. M. & Co., Auburn, N. Y.
Woodruff, C. H. & Co., Elgin, Ill.
Woodruff, G. A., Kankakee, Ill.
Woodstock Iron Co., Heflin, Ala.
Woodward, D., Clinton, Mich.
Woodward Iron Co., Wheeling P. O., Ala.
Woonsocket Machine and Press Co., Woonsocket, R. I.
Worcester, A., Rochester, Vt.
Worcester Malleable Iron Co., Albany, c. Muskeego st., Worcester, Mass.

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Worrall & Co., 28 Elm st., N. Y.
Worth, W. H., Petaluma, Cal.
Worth Bros., Fullerton av., n. N. W. R. R., Chicago, Ill.
Wright, C., Berlin, N. J.
Wright, R. N., New Springfield, O.
Wright, Dana & Co., Utica, N. Y.
Wright, T. & Son, Urbana, Ill.
Wyoming Valley Mfg. Co., Wilkesbarre, Pa.
Wysor, Haines & Patterson, Muncie, Ind.
Yagle, W. & Co. (Ltd.), 32d, c. A. V. R. R., Pittsburgh, Pa.
Youngstown, Rolling Co., 36 W. 3d st., Cincinnati, O.; Youngstown, O.
Yocum, J. & Son, 111 Drinker st., Phila., Pa.
York Rolling Mill, York, Pa.
Young, C., McMinnville, Ore.
Young & Schlough, Easton, Pa.
Young & Tupper, Petaluma, Cal.
Zeigler Iron Co., 231 Spear st., San Francisco, Cal.
Zimmerman, A. L., Ironton, Mo.
Zimmerer, Eugene, 564 W. 12th st., Chicago, Ill.
Zug & Co. (Ltd.), 13th, c. Etna st., Pittsb'gh, Pa.
Zwkel, Sacramento, Cal.

Iron—Galvanized.

Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. 111.
Alexander, W. W., Richmond, Ind.
American Galvanizing Works, 298 E. Pearl st., Cincinnati, O.
Apollo Iron & Steel Co., 801 Hamilton Bldg., Pittsb'gh, Pa.
Austin, Obdyke & Co., 1705 Chestnut st., Phila., Pa.
Bannantine Galvanized Iron Mfg. Co., 117 Soulard st., St. Louis, Mo.
Biersach & Niedermeyer, Milwaukee, Wis.
Bittenbring, E. O., 20 Trumbull st., Hartford, Conn.
Boston Galvanizing Works, 145 Fulton st., Boston, Mass.
Brodrick & Curtis, 372 Elm st., New Haven, Conn.
Bryant, J. H., & Co., 61 Michigan st., Chicago, Ill.
Buckingham, A. H., 977 Grand st., New Haven, Conn.
Burke, Thos., Springfield, Mo.
Carpenter, Annear & Co., 122 Eighth st., Louisville, Ky.
Chamberlain & McNaul, 520 Beach st., Phila., Pa.
Chase & Pearsall, 2423 South st., Phila., Pa.
Cincinnati Corrugating Co. (The), Eggleston av., ab. 6th st., Cincinnati, O.
Cochran & Powers, 1919 Pine st., St. Louis, Mo.
Cohoes Galvanized Iron Works, Cohoes, N. Y.
Corbett, F. W., 280 Elm st., New Haven, Conn.
Corcoran, J. F. & Co., 207-209 E. Hughes st., Balt., Md.
Cullen, M., 44 Ann st., Hartford, Conn.
Denmars, W., 21 Mechanic st., Newark, N. J.
Detterman, J. B., Louisville, Ky.
Dreyer, L., 339 W. 18th st., N. Y.
Duncan & Jackson, Bath, Me.
Dunlevy, A. C., 515 N. Levee st., St. Louis, Mo.
East Boston Galvanized Works, 230 Border st., East Boston, Mass.
Ewald Iron Co., St. Louis, Mo.
Foos, G. S. & Co., Springfield, O.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Gill, Wm. A. & Co., Columbus, O.
Godson, Richard N., Cedar Rapids, Ia.
Goggin & Knowles, 378 E. Main st., Rochester, N. Y.
Griffiths, J. A., 513 E. 19th st., N. Y.
Griswold, Richmond & Gloch, 2 & 4 Main st., Meriden, Conn.
Keilman, C., 3219 Chestnut st., Phila. Pa.
Hetzell, J. G. & Son, 225 N. Howard st., Balto., Md.
Hill, Jas. Mfg. Co., 40 Westfield st., Providence, R. I.
Hoops, E. T., 666 Hudson st., N. Y.
Hopmann, H. & Son, Jefferson av., c. Benton st., St. Louis, Mo.
Huenefeld, E. H., 15 E. 9th st., Cincinnati, O.
Jersey City Galvanizing Co., 69 Bay st., Jersey City, N. J.; 98 John st., N. Y.
Kneisley & Prugh, 232 E. Green st., Dayton, O.
Knisely & Miller, 129-131 S. Clinton st., Chicago, Ill.
Kutschke, Oswald, 5421 Wentworth av., Chicago. Ill.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Laufman & McMaster, 5th av., opp. Moultrie st., Pittsburgh, Pa.
Leadley & Co., 762 Woodbridge st., Detroit, Mich.
Lee, J. & Co., 34 Main st., San Francisco, Cal.
Lefferts, Marshall & Co., 54 Cliff st., N. Y.
Lemsford & Hughes, Birmingham, Ala.
Loop, Wm. H., Cohoes, N. Y.
McCullough Iron Co., Wilmington, Del.
McDaniel & Harvey Co., 16th st., c. Washington av. Phila., Pa.
McLean, John, 298-300 Monroe st., N. Y.
McQuiston, J. & Co., 26th, c. Railroad st., Pittsburgh, Pa.
McVoy, John & Co., 25 Michigan st., Chicago, Ill.
Manufacturers' Galvanizing Co., 2d av., n. Try st., Pittsburgh, Pa.
Marshall Bros., & Co., Beach, c. Marlborough st., Phila., Pa.
Maryland Galvanizing Works, 290 W. Lee st., Balto., Md.
Maypole Bros., 60 S. Canal st., Chicago, Ill.
Merry, John & Co., 535-547 W. 15th st., N. Y.
Mesker & Bro., 421-425 S. 6th st., St. Louis, Mo.
Mignault, E., 172 Mercer st., N. Y.
Moorhead, McCleane Co., 16 W. Lake st., Chicago, Ill.
Moorhead & Co., 118 Water st., Pittsburgh, Pa.
Nelson, A., 295 Pearl st., N. Y.
Noyes, E. E., 612 Austin av., Chicago, Ill.
Owen & Chase, cor. 12th and Noble sts., Phila., Pa.
Penn Mfg. Co., 214 Dauphin st., Phila., Pa.
Peters & Sons, G. H., 297 Main st., Buffalo, N.Y.
Philadelphia Galvanizing Co. (The), 2130 Race st., Phila., Pa.
Phœnix Galvanizing Co. (Ltd.), 28-34 Penn av., Pittsburgh, Pa.
Quernheim, W. H. & Bros., 1526 N. 15th st., St. Louis, Mo.
Reese & Callahan, 36 E. 2d st., Dayton, O.
Republic Iron Works (Ltd.), 1st av. and Smithfield st., Pittsburgh, Pa.
Rusbridge, John & Son, 435 Broadway, Buffalo, N. Y.
Schmidt, F. & Sons, Milwaukee, Wis.
Schriver, Weatherly & Co., Grand Rapids, Mich.
Siddons, J. & Co., 157 E. Main st., Rochester, N. Y.
Simpson, W. T. & Co., 298 E. Pearl st., Cincinnati, O.
Smith, J., Kansas City, Mo.
Soho Iron Mills (Moorhead-McCleane Co.), Pittsburgh, Pa.
Soho Iron & Steel Works, 16 W. Lake st., Chicago, Ill.
Standard Iron Co., Rridgeport, O.
Stender & Schluederberg, 151 1st av., Pittsburgh, Pa.
Strauss, J. E. & Co., 45 Richmond st., Phila., Pa.
Sweet, A. K., 907 Baltimore av., Kansas City, Mo.
Swenck, P. W., Louisville, Ky.
Tiebout, W. & J., 16-18 Chambers st., N. Y.
Valle & Young, 311 North st., Balt., Md.
Van Norden & Co., E. Boston, Mass.
Volta Iron Co. (Ltd.), 12th, c. Pike st., Pittsb'gh, Pa.
Wallis, C. W., 54 Hermon st., Worcester, Mass.
Whitaker Iron Co., Wheeling, W. Va.
Whiting, W. H. & Co., 216 E. Pratt st., Balt., Md.
Whiting & Co., 398 Madison st., N. Y.
Whitney, A. R. & Co., 17 B'way, N. Y.
Whitnum, S., N. 10th, c. 1st st., Brooklyn, E. D., N. Y.
Wilcox, Crittenden & Co., S. Main st., Middletown, Conn.

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Winchet, Chas. & Co., 3d and St. Clair sts., Dayton, O.
Witt & Brown, 144 W. 3d st., Cincinnati, O.
Woltsteiner, A. L. & Co., Washington, D. C.
Worcester Galvanized Iron Works, 150 Union st., Worcester, Mass.

Iron—Galvanized Sheet.

Apollo Rolling Mills (Apollo Iron and Steel Co.), Pittsburgh, Pa.
Britton Iron and Steel Co., Cleveland, O.
Cleveland Rolling Mill Co., Cleveland, O.
Marshall, Lefferts & Co. (Agents), 417 W. 24th st., N. Y.
Merry, John & Co., 535 W. 15th st., N. Y.
Moorhead-McCleane Co., Pittsburgh, Pa.
Whitaker Iron Co., 12 Cliff st., N. Y.
Wood, Alan & Co., 519 Aroh st., Phila., Pa.

Iron—Gray.

Barnett, Oscar, Newark, N. J.
Cleveland City Forge and Iron Co., Cleveland, Ohio.
Star Furnace Co., Jackson, O.
Western Malleable Gray Iron Co., Port Washington, Wis.

Iron—Hinge.

Clark, Wm. & Co., Pittsburgh, Pa.
Painter, J. & Sons, Pittsburgh, Pa.

Iron—Malleable.

Albany Malleable Iron Works, Albany, N. Y.
Arcade Malleable Iron Co., 63-67 Washington sq., Worcester, Mass.
Atwood & McCaffrey, 60 3d av., Pittsburgh, Pa.
Barnett, Oscar, Newark, N. J.
Bridgeport Malleable Iron Co, R. R. av., c. South av., Bridgeport, Conn.
Buckeye Malleable Iron Works, Russell, c. C. C. C. & I. R. R. st., Columbus, Ohio.
Burns, Willis B., 38 W. Fayette st, Syracuse, N. Y.
Capital City Malleable Iron Co., Albany, N. Y.
Champion Malleable Iron Co., Springfield, O.
Chicago Malleable Iron Co., 26th st., n. Blue Island av., Chicago, Ill.
Cleveland Malleable Iron Co (The), Platt, c. C. P. & P. R. R. st., Cleveland, O.
Columbus Malleable Iron Works, W, c. Randolph st., Columbus, O.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Dayton Malleable Iron Co., 1317 W. 3d st., Dayton, O.
Devlin, Thos. & Co., 1615 N. 10th st, Phila., Pa.
Eberhard Mfg. Co., C. & P. R. R., n. Woodland av., Cleveland, O.
Elbel & Co., Canton, O.
Erie Malleable Iron Co. (Ltd.), Cherry, c. 13th st., Erie, Pa.
Fitch, W. & E. T., 151 East st., New Haven, Conn.
Frazer & Jones Co., Syracuse, N. Y.
Haven, J. L. & Co., 56 Plum st., Cincinnati, O.
Illinois Malleable Iron Works, Diversey av., Chicago, Ill.
Indianapolis Malleable Iron Co., Indianapolis, Ind.
McConway & Torley Co., 48th st. and A. V. R. R., Pittsburgh, Pa.
Malleable Iron Fittings Co., Branford, Conn.
Malleable Iron Works, New Britain, Conn.
Meeker, S. J., Newark, N. J.
Meriden Malleable Iron Co., 37 Barclay st., N. Y.
Minnemeyer, H. W., & Co., Allegheny, Pa.
Moline Malleable Iron Co., Moline, Ill.
Munn & Austice, 220-238 N. Water st., Rochester, N. Y.
Munson, Hayden & Co., c. Russell st. and C. C. C. and I. R., Columbus, O.
North & Judd Mfg. Co., New Britain, Conn.
North, Q. B., & Co., 68 Franklin st., New Haven, Conn.
Northwestern Malleable Iron Co., Milwaukee, Wis.
Oriskany Malleable Iron Company, Oriskany, N. Y.
Page & Sill, Franklin, c. Westerlo st., Albany, N. Y.
Pratt & Letchworth, office 52-54 Terrace st., Buffalo, N. Y.
Queen City Malleable Iron Co., 2d, c. Vine st., Cincinnati, O.
Racine Malleable and Wrought Iron Co., Racine, Wis.
R. I. Malleable Iron Works, 564 Eddy st., Providence, R. I.
Rochester Malleable Iron Works, 220-238 N. Water st., Rochester, N. Y.
Rome Malleable Iron Works, Rome, N. Y.
St. Louis Malleable Iron Co., 2108-2128 Market st., St. Louis, Mo.
Springfield Malleable Iron Co., Springfield, O.
Syracuse Malleable Iron Works, Syracuse, N. Y.
Tanner, R. W. & Son., 852 Broadway, St. Louis, Mo.
Terry, Andrews & Co., Terryville, Conn.
Toledo Malleable and Gray Iron Works, Toledo, O.
Torrance & Co., Troy, N. Y.
Troy Malleable Iron Co., 14th, n. Congress st., Troy, N. Y.
Tuttle & Whittemore Co., Naugatuck, Conn.
Vulcan Iron Works, John st., New Britain, Conn.
Warner, G. F., New Haven, Conn.
Warr, James C., Wareham, Mass.
Westmoreland Malleable Iron Co., Westmoreland, N. Y.
Wilcox, Crittenden & Co., Middletown, Conn.
Wisconsin Malleable Iron Co., Milwaukee, Wis.
Woodruff, Miller & Co., Mt. Carmel, Conn.
Wood, Zelotes & Co., c. Randolph and West sts., Columbus, O.
Worcester Malleable Iron Works, Worcester, Mass.
Youngstown Malleable Iron Co. (The), Youngstown, O.
Zelotes, Wood & Co., Columbus, O.

Iron Merchants.

Abbott, G. F. & Co., 245 Pearl st., Brooklyn, N. Y.
Abbott, J. & Co., 35 Oliver st., Boston, Mass.
Abbott, Jere. & Co., 23 Cliff st., N. Y.
Abeel Bros., 190 South st., N. Y.
Adams, Henry H., 177 Broadway, N. Y.
Adams, T., J., 4th, c. Race st., Cincinnati, O.
Adams, W. F., Toledo, O.
Adams, Hugh W. & Co., 56 Pine st., N. Y.
Addy, Matthew & Co., Pike's Bldg., Cincinnati, Ohio.
Ahl, C. W. & Son, Bolling Springs, Pa.
Albright & Co., 16 Chapin Blk., Buffalo, N. Y.
Alford, G. H., Willimantic, Conn.
Allen, J. H. & Co., Bath, Me.
Allen's, S. Sons, Greenfield, Mass.
Altoona Iron Co., Altoona, Pa.
American Tube Box and Iron Co., Middletown, Pa.
Andrews Bros. & Co., 53 Dearborn st., Chicago, Ill.; 15 White Bldg., Buffalo, N. Y.
Antonie, A. E., & C. P. Decklerch, 224 S. 5th st., Phila., Pa.
Arend, J., Sandusky, O.
Arend Bros., Sandusky, O.
Athland Iron Co., Ashland, Pa.
Auer, J., Jr, 179 Middleton st., B'klyn, N. Y.
Bacon & Co., 107 Oliver st., Boston, Mass.
Badgley, C. W., 38 Campan Bldg., Detroit, Mich.
Bailey, J. F., 257 S. 4th st., Phila., Pa.
Baldwin Bros., Clinton, Ia.
Ball & Carpenter, Ansonia, Conn.
Barney & Ferris, Sandusky, O.
Barr & Co., Nashua, N. H.
Bartlett, N. S. & Co., 72 Kilby st., Boston, Mass.
Bartram, O., 459 Water st., Bridgeport, Conn.
Bassett & Presley, Elm, c. Hemlock st., Cleveland, O.
Bates, F. A., 157½ Water st., Cleveland, O.
Bay State Iron Co., 12 Pearl st., Boston, Mass.

The numbers following names indicate page on which the firm advertises.

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Beach, I. L., Lafayette, Ind.
Beals, G. & Son, 40 White Bldg., Buffalo, N. Y.
Beals & Brown, 44 Terrace st., Buffalo, N. Y.
Beaver & Co., Winfield, Pa.
Beeh, Edw. & Co , 69 Wall st., N. Y.
Beck & Corbitt Iron Co., 937 N. 2d st., St. Louis, Mo.
Belknap, W. B. & Co., 115-121 W. Main st., Louisville, Ky.
Bellows & Manson, 77 Oliver st., Boston, Mass.
Belmont Nail Co., 36 W. 3d st., Cincinnati, O.
Benisch, C., 14 Boston st., Newark. N. J.
Benjamin, H. & Bro., New Orleans, La.
Benney, J., Jr., 543 Wood st., Pittsburgh, Pa.
Bertolet Bros., 407 Walnut st., Phila., Pa.
Bertolet, Ezra, 407 Walnut st , Phila., Pa.
Bertolette & Lukens, 216 S. 4th st., Phila., Pa.
Bethlehem Iron Co., South Bethlehem, Pa.
Billen & Cramer, 115 Dearborn st. (Room 64), Chicago, Ill.
Bingham, W. & Co., 146 Water st., Cleveland, O.
Birtwell, J. & Co., 60 Broad st., Boston, Mass.
Bissell, David S., 5 and 6 Bissel Blk., Pittsburgh, Pa.
Blair Iron and Coal Co., Bennington, Pa.; Hollidaysburg, Pa.
Blake & Co., 137 Barrow st., N. Y.
Blake, Boutwell & Co., Junc. of Bridge, Worcester, Mass.
Blanchard Bros., Montpelier, Vt.
Block, Pollak & Co., Grove, c. 16th st., Chicago, Ill.; 3d, c. Plum st., Cincinnati, O.
Blodgett & Clapp Co., 51 Market st., Hartford, Conn.
Bloomsburg Iron Co., Bloomsburg, Pa.
Blymer Iron Co., Temple, Pa.
Boker, C., 93 John st., N. Y.
Bonnell, Botsford & Co., Youngstown, O.
Bonner & Zollner Iron Co., 919 N. Main st., St. Louis, Mo.
Boone, J. H., Reading, Pa.
Bope, C. A., Mt. Vernon, O.
Borden & Lowell, Frostburg, Md.; 71 West st., N. Y.
Borland, A. G., 605 Smithfield st , Pittsb'gh, Pa.
Bostwick, Brann & Co., Toledo, O.
Boutwell Bros. & Co., Lowell, Mass.
Boyle, T. G., & Co., 708 Penn av.. Pittsburgh, Pa.
Bragg, N. N., & Sons, Bangor, Me.
Brecht, L., 216 W. Franklin st., Balt., Md.
Bridgeport Iron & Steel Co., Bridgeport, O.
Brigham, C. E., 22 Fulton st., Boston, Mass.
Broatch, W., Omaha, Neb.
Brooks Bros., Palmer, Mass.
Brown & Co., 16 W. Lake st., Chicago, Ill.
Brown, Bonnell & Co., 138 E. Jackson st. (Room 205), Chicago, Ill.
Brown, McClure & Co., 69 Purchase st., Boston, Mass.
Brown & McCord, Springfield, O.
Browne, R. G., 64 4th av., Pittsb'gh, Pa.
Bruner, O. W. & Co., 118 Dearborn st. (Room 26), Chicago, Ill.
Bugbee, T. C., Putnam, Conn.
Buhl Sons & Co., 103 Woodbridge st., Detroit, Mich.
Burgess, W. T., & Son, 146 S. Pearl st., Albany, N. Y.
Burke, W. B., 38 E. Main st., Rochester, N. Y.
Burt, T. W., & Co., Wheeling, W. Va.
Bushnell, N. T., & Co., 712 Chapel st., New Haven, Conn.
Bush, Frederick B., 175 Dearborn st., Chicago, Ill.
Bussenius & Cunliffe, 1142 Washington av., Phila., Pa.
Caemmerer, L., 46 DeKalb av., B'klyn, N. Y.
California Iron & Steel Co., 202 Market st., San Francisco, Cal.
Callahan, C., 128-130 Folsom st., San Francisco, Cal.
Calumet Iron and Steel Co., 164 Dearborn st., Chicago, Ill.
Cambria Steel, Cambria Iron Co., 218 S. 4th st., N. Y. 2.
Carnegie Bros. & Co. (Ltd.), 205 La Salle st., Chicago, Ill.; Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 205 La Salle st., (Room 209), Chicago, Ill.; Pittsburgh, Pa.
Carolan, Cory & Co., 117 California st., San Francisco, Cal.
Carpenter, Jno. O., 390 Hudson st., N. Y.
Carpenter Bros., 32 Vine st., Cincinnati, O.
Carpenter & Fowler, Willimantic, Conn.
Carter, G. T., 400 Wood st., Pittsburgh, Pa.
Carthage Iron Co., Carthage, N. Y.
Case & Fuller, Norwich, Conn.
Casey, T. S. & Co , 115 Dearborn st. (Room 35), Chicago, Ill.
Central Virginia Iron Co., Lynchburg, Va.
Chace, Chas. T. G., 445 West st., N. Y.
Chalmers & Williams, Minneapolis, Minn.
Chase, H. Co., Otsego, Mich.
Chase, Parker & Co., 33 Pearl st., Boston, Mass.
Chateaugay Ore and Iron Co., Dannemora, N.Y.
Childs, A. H., 83 4th av., Pittsburgh, Pa.
Chrome Steel Works, Kent av., c. Keep st., B'klyn, N. Y.
Claffy, John, 48 Dey st., N. Y. **91.**
Clark, B. A., Brattleboro, Vt.
Clarke, A. & Bro., 102 E. Lombard st., Balt., Md.
Cleveland, Brown & Co., 17 Merwin st., Cleveland, O.
Cleveland Rolling Mill Co., 91 Lake st., Chicago, Ill.
Clingan & Buckley, Douglasville, Pa.
Clooney, W., Lynn, Mass.
Coatesville Iron Works, 26 W. Lake st., Chicago, Ill.
Cobb, M. L., 38 Kilby st., Boston, Mass.
Cobbins, T. C. & Son, Dayton, O.
Cochnower, Perrin & Co., 57 Oliver st., Boston, Mass.
Coddington, T. B. & Co., 27 Cliff st., N. Y.
Coe, James A. & Co., 106 Mulberry st., Newark, N. J.
Coffin, W. E. & Co., 8 Oliver st., Boston, Pa.
Colebrookdale Iron Co., Little Oley, Pa.
Colburn, C. L., 3 Johnston Bldg., Cincinnati, O.
Coleman, T. C., 252 W. Main st., Louisville, Ky.
Collins, H. E. & Co., 34 Lewis Blk , Pittsburgh, Pa.
Collord & McKeefry, 317 Market st., Pittsburgh, Pa.
Colorado Coal and Iron Co., 13 Pine st., San Francisco, Cal.
Columbia Iron Co., Hudson, N. Y.; 133 La Salle st., Chicago, Ill.
Combination Steel and Iron Co., Chester, Pa.
Comey, W. G., 15 Foundry st., Boston, Mass.
Condit, Fuller & Co. (Room 23), 122 Water st., Cleveland, O.
Congdon, Carpenter & Co., Fall River, Mass.; 81-85 Canal st., Providence, R. I.
Connelly & Co. (Ltd.), 70 Kilby st., Boston, Mass.
Converse, A. T., Norwich, Conn.
Coon, Chas. E., 45 B'way, N. Y.
Cooney, Daniel F., 88 Washington st., N. Y.
Coplay Iron Co., Coplay, Pa.
Cordelia Iron Co., Cordelia, Pa.
Corey, E. & Co., Portland, Me.
Corse, A. P., 293 River st., Troy, N. Y.
Couch, R. & Co., 376-378 Water st., Bridgeport, Conn.
Cox, Justice, Jr., & Co., 224 S. 4th st., Phila., Pa.
Crane Iron Co., Catasauqua, Pa.
Crane, J. S. & Co., 140 Mulberry st., Newark, N. J.
Crane, U. O. & Co., 74 Wall st., N. Y.
Crocker Bros., 32 Cliff st., N. Y.
Crockett, Oglesby & Co., Crockett's Depot, Va.
Crown Point Iron Co., Crown Point, N. Y.
Crozer Steel and Iron Co., Roanoke, Va.
Cummings & Emerson, Peoria, Ill.
Cunningham, Jos. L., 102 Chambers st., N. Y.
Curtis, Jas. L., 62 William st., N. Y.
Curtis, N. & N. W., 4 Post Office sq., Boston, Mass.
Cutler, E. P. & Co., 15 Oliver st., Boston, Mass.
Dallett & Co., 315 Willings al., Phila., Pa.
Dalzell, L. W. & Co., Market, c. Water st., Pittsburgh, Pa.
Damerel, Geo., 12 Cortlandt st., N. Y.
Dana & Co., 20 Nassau st., N. Y.
Daniels Hardware Co., Manchester, N. H.

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Day Bros., 419-421 N. 2d st., Phila., Pa.
Diamond State Iron Co., 11 Pine st., N. Y.
Dickerman & Jopp, Winsted, Conn.
Dickerson, Clarence, 24 Cliff st., N. Y.
Dickson, G. L., Scranton, Pa.
Dickson, T. H., 313 Wood st., Pittsburgh, Pa.
Diller, H. A., Lancaster, Pa.
Doble, A., 13 Fremont st., San Francisco, Cal.
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
Donahue, R., Burlington, Ia.
Donnelly, M. & Co., 134 Leroy st., N. Y.
Donnelly & Dempsey, 402 11th av., N. Y.
Dougherty, H., 216 New st., Newark, N. J.
Douglas, G. B., 115 Broadway, N. Y.
Dounce, W. J. & Co., Elmira, N. Y.
Dover Iron Co. of N. J. (The), Dover, N. J.
Dravo, H. G., 413 Wood st., Pittsburgh, Pa.
Dreifus, C., 101 4th av., Pittsburgh, Pa.
Duke, H. T. & Co., 2d, c. Race st., Cincinnati, O.
Duffy, J. S., Lyon st, opp. depot, Bridgeport, Conn.
Dunbar, G. & Co., 76 Pearl st., Boston, Mass.
Duncannon Iron Co., Duncannon, Pa.
Dunham, Carrigan & Co., 17 Beale st., San Francisco, Cal.
Earnshaw, A., 203 Walnut pl., Phila., Pa.
Earnshaw, G. E., 203 Walnut pl., Phila., Pa.
Earnshaw, J. W. S., 203 Walnut pl., Phila., Pa.
East Bridgewater Iron Co., 240 Congress st., Boston, Mass.
Eastman Machine Co., Troy, Vt.
Eckstein, Chas. G. & Co., 32 Liberty st., N. Y.
Egleston Bros. & Co., 166 South st., N. Y.
Elden, W., 13 Sycamore st., Cincinnati, O.
Elder & Tutt e, Springfield, O.
Ellsworth & Dudley, Poughkeepsie, N. Y.
Ely & Williams, 38 Park Row, N. Y.; 1232 Market st., Phila., Pa.
Engle, Frederick, 235 B'way, N. Y.
Ennis & Co., 60 New st., N. Y.
Ensign, W. A. & Son, 53 Orange st., New Haven, Conn.
Ensworth, L. L., 104 Front st., Hartford, Conn.
Erie Malleable Iron Co., Erie, Pa.
Esherick & Co., 263 S. 4th st., Phila., Pa.
Etting, Edward J., 222 S. 3d st., Phila., Pa.
Eureka Iron and Steel Works, Wyandotte, Mich.
Evans, C. W. & Co., 3d, c. Main st., Cincinnati, Ohio.
Evans, D. & Co., 125 Dyer st., Providence, R. I.
Evans, F. H., 596 Kent av., B'klyn, N. Y.
Fallkill Iron Co., Poughkeepsie, N. Y.
Finley, Garrett & Wilson, Wilmington, Del.
Fisher & Ross, 343 S. Front st., Phila., Pa.
Foot, H. & Co., Springfield, Mass.
Ford, T., Youngstown, O.
Fowler & Sons, 98 Seneca st., Buffalo, N. Y.
Frankland, C. E., 106 S. Water st., Providence, R. I.
Franklin Iron Co., Franklin Furnace, N. J.
Fraser, Philip H., 18 Wall st., N. Y.
Froment, Chas. B., 115 Dearborn st. (Room 23), Chicago, Ill.
Froment, Frank L., 112 John st., N. Y.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Fuller, Dana & Fitz, 110 North st., Boston, Mass.
Gainsbury, R. L., 209 Atwater st., Detroit, Mich.
Garrett, F. R., 104-112 Cannon st., Bridgeport, Conn.
Gebecke, C., 227 Belmont av., Newark, N. J.
Gebhart, S. T. & G. A., Dayton, O.
George's Creek Coal and Iron Co., Lonaconing, Md.
Gere Iron and Mining Co., Port Leyden, N. Y.
Gibbs, G. W. & Co., 35 Fremont st., San Francisco, Cal.
Giddings & Patterson, Danville, Ill.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Gillingham, H., 1015 N. Front st., Phila., Pa.
Gilmore & Rustis, 70 Kilby st., Boston, Mass.
Glasgow Iron Co., Pottstown, Pa.
Gleason, Chas. W., 32 Liberty st., N. Y.
Glendon Iron Co., 18 Post Office sq., Boston, Mass.; Glendon, Pa.
Globe Rolling Mill Co. (The), 163 W. Pearl st., Cincinnati, O.
Godfrey, C. Omaha, Neb.
Goff, J., Jr., 106 3d av., Pittsb'gh, Pa.
Goodwin, Robt. N., 104 John st., N. Y.
Graff, Bennett & Co., 988 N. 2d st., St. Louis, Mo.
Gray, Wm. P. (Ltd.), 53 Dearborn st. (Room 23), Chicago, Ill.
Green, F. M., Portsmouth, O.
Green, H. L., 46 E. Lake st., Chicago, Ill.
Green & Bro., 397 Water st., N. Y.
Green's, H. Son & Co., B'way, c. 4th st., Troy, N. Y.
Greenbaum, M., Sons, 9 & 11 N. Canal st., Chicago, Ill.
Greer, J. J., & Co., 207 W. Pratt st., Balt., Md.
Gregory & Thompson, 234 E. Lake st., Chicago, Ill.
Grissard, F. L., Vevay, Ind.
Groome, S. W., 411 Walnut st., Phila., Pa.
Gurney, C. H., & Co., 247 E. Lake st., Chicago, Ill.
Hallock, F., & Co., Birmingham, Conn.
Hamilton & Co., Springfield, O.
Hand, Burr & Co., 614 Market st., Phila., Pa.
Handy, J., New Bedford, Mass.
Harrington, M. J., 60 N. 6th st., B'klyn, N. Y.
Harrington & Robinson, 10 Oliver st., Boston, Mass.
Harris, J. F., & Son, Fort Edward, N. Y.
Harrison & Knight, Minneapolis, Minn.
Hart, Wm. R., & Co., 226 Walnut st., Phila., Pa.; 84 4th av., Pittsburgh, Pa.
Harty, A. G., 609 Smithfield st., Pittsb'gh, Pa.
Hawes, A. C., 95 Dearborn st., Chicago, Ill.
Hawley, C. G., Omaha, Neb.
Hawkridge Bros., 24 Custom House st., Boston, Mass.
Hazen, J. F., & Co., 4th, c. Main st., Cincinnati, Ohio.
Hayden & Baker, 56 N. Scioto st., Columbus, O.
Heckhereds, R. A. & Co., 238 S. 3d st., Phila., Pa.
Hedstrom, E. L., 15 White Bldg., Buffalo, N. Y.
Heitman, F. W. & Co., Houston, Texas.
Hilb & Bauer, Front, c. Ramsay st., Cincinnati, Ohio.
Hillman & Wormsley, 8 Wood st., Pittsburgh, Pa.
Hitner, Henry A. & Sons, 2304-2316 Sergeant st., Phila., Pa.
Hobbs, Geo. E., 5-7 Union st., Bridgeport, Conn.
Hoffman, J. W. & Co., 208 S. 4th st., Phila., Pa.
Hoffman, R. C. & Co., 21 S. Frederick st., Balt., Md.
Hoffstot, F. N. & Co., 112 Water st., Pittsburgh, Pa.
Hogan, John L. & Co., 216 S. 4th st., Phila., Pa.
Hogan, Geo. M., 417 Commerce st., Phila., Pa.
Hogan & Burr, 45 B'way, N. Y.
Hogan & Son, 243 Pearl st., N. Y.
Holder & Herrick, 223 Milk st., Boston, Mass.
Holliday, W. J. & Co., Indianapolis, Ind.
Hollidaysburg & Gap Iron Co., Hollidaysburg, Pa.
Hollidaysburg Iron and Nail Co., Hollidaysburg, Pa.
Hood, R. S., 51 Fulton st., Boston, Mass.
Hoopes, Evan T., 666 Hudson st., N. Y.
Hopkins, Edw. F., 104 John st., N. Y.
Hopkins, Stephen T., 240 Pearl st, N. Y.
Horne, Wm. M. & Co., 74 India st., Boston, Mass.
Hornlein, B., 175 Boyd st., Newark, N. J.
Houdlette & Dunnells, 272 Franklin st., Boston, Mass.
Houghton & Richards, 39 Fort Hill sq., Boston, Mass.
Howard, Childs & Co., 605 Smithfield st., Pittsburgh, Pa.
Howe & Co., 181 River st., Troy, N. Y.
Hubbard, C. & Co., 46 Cliff st., N. Y.
Huggins, T. J., 111 Mercer st., Balt., Md.
Huglunds, N. M., Sons & Co., 38 Kilby st., Boston, Mass.
Hull & Rogers, Danbury, Conn.
Humphrey, Dodge & Smith, Concord, N. H.
Hunter, S. S., 230 Middle st., Bridgeport, Conn.
Huntington, Hopkins & Co., Bush, c. Market st., San Francisco, Cal.

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Hutchinson, E. A., Johnston Bldg., Cincinnati, Ohio.
Hyde, E. D., Montpelier, Vt.
Inwood, W., Evansville, Ind.
Iron and Steel Band Co. (Ltd.), Pittsburgh, Pa.
Isaacs, W. B., 13 Pine st., San Francisco, Cal.
Isabella Furnace Co., Sharpsburg, Pa.
Jackson, Jos. H., 206 Franklin st., N. Y.
Jacobs, W. O. & Co., Killingly, Conn.
Jacobs, Edmund Y., 38 Park Row, N. Y.
Janney, Brooks & Eastman, Minneapolis, Minn.
Jefferson Iron Co., Antwerp, N. Y.
Jessop, W. & Sons, 53 W. 2d st., Cincinnati, O.
Jesup, F. W. & Co., 67 Liberty st., N. Y.
Jewkes, J., 614 Smithfield st., Pittsburgh, Pa.
Johnson, J. R. & Co., Wilmington, Del.
Johnson & Hotchkiss, Ansonia, Conn.
Joliet Steel Co., Joliet, Ill.
Jones, B. M. & Co., 11 Oliver st., Boston, Mass.
Jones, R. Ralston, 107 Dearborn st., Chicago, Ill.
Jones & Laughlins (Ltd.), 28 W. Lake st., Chicago, Ill.
Judson, Benj. F., 457 Water st., N. Y.
Kaufman, W. M., Topton, Pa.
Kaufman, W. M. & Co., Reading, Pa.
Kearns, J., 219 Water st., B'klyn, N. Y.
Keeley, J. & Co., 206 Walnut pl., Phila., Pa.
Keiper, Samuel M., 62 Liberty st., N. Y.
Kelly, J., 223 Greene st., B'klyn, N. Y.
Kelley, Maus & Co., 184 E. Lake st., Chicago, Ill.
Kent, D. H. & Co. (Ltd.), 1009 Arch st., Phila., Pa.
Kessler & Hall, 118 Dearborn st., Chicago, Ill.
Kessler, W. S. & Co., 115 Dearborn st. (Room 53), Chicago, Ill.
Kleman, W., 312 Oakland st., B'klyn, N. Y.
Kimball, E. D. & Co., 234 E. Lake st., Chicago, Ill.
Kimbark, S. D., 74-84 Michigan av., Chicago, Ill.
Kimberly, P. L. & Co., 40 Dearborn st. (Room 10), Chicago, Ill.
King, H. S., 98 4th av., Pittsburgh, Pa.
Kinsey, Geo. & Co., 123 Central av., Cincinnati, O.
Kirkland Co., Kirkland, N. Y.
Kish, J. J., 605 Smithfield st., Pittsburgh, Pa.
Kittanning Iron Co., Kittanning, Pa.
Knight, C. C. & Bro., 301 N. 2d st., Phila., Pa.
Krause, G. & Co., Lebanon, Pa.
Kuglen, S., Wheeling, W. Va.
Kursheedt, Asher, 35 Liberty st., N. Y.
Lackawanna Iron & Coal Co., Brewster, N. Y.
Lauer, Frank, 213 N. Clark st., Chicago, Ill.
Lea, J. Tattnall & Co., 400 Chestnut st., Phila., Pa.
Lebanon Iron Co., Lebanon, Pa.,
Lee, James & Co., 72 Pine st., N. Y.
Lefferts, Marshall & Co., 54 Cliff st., N. Y.
Lehigh Zinc & Iron Co., South Bethlehem, Pa.
Leiberman, A., 1507 State st., Chicago, Ill.
Leishman & Snyder, 605 Smithfield st., Pittsb'gh, Pa.
Lemley Bros., Quincy, Ill.
Leng's, John S. Sons & Co., 4 Fletcher st., N. Y.
Leonard, J., 77 Clinton st., Newark, N. J.
Leonard, J. T., 98 Plymouth st., B'klyn, N. Y.
Levis, H. & Co., 132 B'way, N. Y.; 234 S. 4th st., Phila., Pa.
Lewander & Co., 126 State st., Boston, Mass.
Lewinske, P., 254 Nassau st., B'klyn, N. Y.
Lickdale Iron Co., Lickdale, Pa.
Liggett, R. & Co., 1201 Market st., Phila., Pa.
Lilienberg, Nils, 150 B'way, N. Y.
Lindsay, Parvin & Co., 328 Walnut st., Phila., Pa.
Linforth, J., 23 Main st., San Francisco, Cal.
Lippincott, C. K. & Co., 235 S. 3d st., Phila., Pa.
Lippincott, J. J. & Co., 131 S. 4th st., Phila., Pa.
Lissberger, L. & Co., 46 Cliff st., N. Y.
Littlefield, M. S., 55 Liberty st., N. Y.
Lloyd, G. H., 19 Milk st., Boston, Mass.
Locke, S. B. & Co., 6 Oliver st., Boston, Mass.
Lockwood, Taylor & Co., 110 Water st., Cleveland, O.
Loeffler & Crane, Toledo, O.
Logan Iron & Steel Co., Lewistown, Pa.
Logan, James H., 804 Penn Bldg., Pittsburgh, Pa. **53.**
Longdale Iron Co., Longdale, Va.
Losey & Co., Easton, Pa.
Low Moore Iron Co., 34 Fort Hill sq., Boston, Mass.
Lucas, A., Peoria, Ill.
Luetkemeyer, H. W., 150 Superior st., Cleveland, Ohio.
Lundberg, G., 38 Kilby st., Boston, Mass.
Lundell, C. G., 7 Exchange pl., Boston, Mass.
Lyman, Frank, 130 Water st., N. Y.
Lyman & Co., 319 Willing's al., Phila., Pa.
Lynchburg Iron Co., Lynchburg, Va.
McArdle, P. J., Newburg, N. Y.
McBarron & Co., 30 Oliver st., Boston, Mass.
McCann, B., 11 Fulton st., Boston, Mass.
McCullough Iron Co., Northeast, Md.
McCosh Iron & Steel Co., Burlington, Ia.
MacDonald, J., 209 S. 3d st., Phila., Pa.
McDonald, P. F., 93 Oliver st., Boston, Mass.
McLanahan, Smith & Co., Hollidaysburg, Pa.
McNernay, R., 146 Wolcott st., B'klyn, N. Y.
Macknet & Doremus, 796 Broad st., Newark, N. J.
Macungie Iron Co., Macungie, Pa.
Mallory, W. S., & Co., 22 W. Randolph st., Chicago, Ill.
Marion Iron Co., Conshohocken, Pa.
Maris, G. M., & Co., Columbus, O.
Marvel, Wm. D., & Co., 70 William st., N. Y.
May, L., & Co., Mount Carmel, Pa.
May, Norman, & Co., 708 Penn av., Pittsb'gh, Pa.
Mechanics & Foster, Worcester, Mass.
Mecklenborg, J. B., 64 W. 3d st., Cincinnati, O.
Merrick, S. G., 216 S. 4th st., Phila., Pa.
Merry, John, & Co., 539 W. 15th st., N. Y.
Metis Wrought Iron Casting Co., 4 P. O. sq., Boston, Mass.
Mexican Iron Mountain Mfg. Co., 88 La Salle st, (Room 30), Chicago, Ill.
Middleton, C. W. & H. W., 945 Ridge av., Phila., Pa.
Miles, M. T. & Son, 50 La Salle st., Chicago, Ill.
Milliken Bros., 59 Liberty st., N. Y.
Milliken & Co., 115 Dearborn st. (Room 83), Chicago, Ill.
Milne, A. & Co., 28 Oliver st., Boston, Mass.; 1 B'way, N. Y.
Milton Iron Co., Milton, Pa.
Missouri Mining & Iron Co., Salem, Mo.
Mitchell, Tranter & Co., Elm, c. 2d st., Cincinnati, O.
Mithoff, H. & Co., Columbus, O.
Moffat, Frank D., 100 Beekman st., N. Y.
Mohr, J. J., 430 Walnut st., Phila., Pa.
Montague, W. W. & Co., 309 Market st., San Francisco, Cal.
Montelius, Righter & Co., Mt. Carmel, Pa.
Montour Iron & Steel Co., Danville, Pa.
Moorehead, Bro. & Co., Sharpsburg, Pa.
Moorehead-McCleane Co., 16 W. Lake st., Chicago, Ill.
Moroney & Co., Dallas, Tex.
Morris & Varney, 22-24 Fremont st., San Francisco, Cal.
Morris, Wheeler & Co., 400 Chestnut st., Phila., Pa.
Mott, C. H., Nashua, N. H.
Mount Hickory Iron Co., Erie, Pa.
Murdock & Co., 15 7th av., Pittsburgh, Pa.
Myers & Lafferty, Springfield, O.
Nash, W., 35 Kent av., B'klyn, N. Y.
Nashua Iron & Steel Co., 38 Pemberton sq., Boston, Mass. **56.**
Naylor & Co., 99 John st., N. Y.
Neal Bros., 612 Liberty av., Pittsburgh, Pa.
New Jersey Iron & Zinc Co., Franklin Furnace, N. J.
Newman, W. H. H. & Co., 78 Main st., Buffalo, N. Y.
Nicols, P. D., 8 Wood st., Pittsburgh, Pa.
Nicols & Dean, St. Paul, Minn.
Nicholson, J. W., 1635 S. State st., Chicaga, Ill.
Nimick & Co., 96 Water st., Pittsburgh, Pa.
Northwestern Coal & Iron Co., 40 Coal and Iron Exchange, Buffalo, N. Y.
Northwestern Iron Co., 406 Milwaukee st., Milwaukee, Wis.

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Norton Iron Works, 3 Johnston Bldg., Cincinnati, O.
Norway Steel and Iron Co., 6 Oliver st., Boston, Mass.
Nova Scotia Iron Co., Nova Scotia, Mo.
O'Brien, J. J., Berry, n. N. 6th st., B'klyn, N. Y.
Oestlag, H. F., Richmond, Ind.
Ogden & Wallace, 85-91 Elm st., N. Y.
Ohl & Co., 430 Walnut st., Phila., Pa.
Omaha Foundry and Machine Co., Omaha, Neb.
Onondaga Iron Co., Geddes, N. Y.
Oregon Iron and Steel Co., 210 Folsom st., San Francisco, Cal.
Ormsby, H. G., 58 Chancery la., Phila., Pa.
Orr, Griffith & Co., Evansville, Ind.
Osborn, S. & Co., 11 Oliver st., Boston, Mass.
Otis Iron and Steel Co., 138 E. Jackson st. (Room 406), Chicago, Ill ; 280 B'way, N. Y.
Pacific Iron and Nail Co., 258 Market st., San Francisco, Cal.
Packard, Warren & Co., Warren, O.
Paddock-Hawley Iron Co., 806-810 N. Main st., St. Louis, Mo.
Page, Newell & Co., 139 Milk st., Boston, Mass.; 18 B'way, N. Y.
Palen & Burns, 257 Washington st., Buffalo, N. Y.
Pancoast & Rogers, 28 Platt st., N. Y.
Pardee & Co., 274 E. Main st., Rochester, N. Y.
Park Bro. & Co., 10 Pine st., San Francisco, Cal.; 64 Pearl st., Boston, Mass.
Parkhurst & Wilkinson, 148 E. Kinzie st., Chicago, Ill.
Parsons, John & Co., 104-106 John st., N. Y.
Paul, James A. & Co., 61 S. Main st., Waterbury, Conn.
Pease, A. G. & R. A., Middletown, Conn.
Penn Iron Co., Lancaster, Pa.
Pennington, G. W. & Sons, 219 Main st., San Francisco, Cal.
Pennsylvania Steel Works, 185 Dearborn st., Chicago, Ill.
Percival & Chambers, Los Angeles, Cal.
Perkins, C. Lawrence, 3 Cotton Exchange, N. Y.
Perkins, F. E. & Bro., 405 South st., N. Y.
Perkins, F. E., India st., opp. P. W. & B. R. R. Depot, Providence, R. I.
Perry, W. H., 288 Dyer st., Providence, R. I.
Perry & Brown, Putnam, Conn.
Persons, B. W., 12 Westminster st., Providence, R. I.
Phila. & Reading Coal & Iron Co., 16 Chapin Blk., Buffalo, N. Y.; 227 S. 4th st., Phila., Pa.
Phillips, Nimick & Co., 53 Dearborn st., Chicago, Ill.
Philip, Casimir V., 18 Liberty st., N. Y.
Philson Iron & Coal Co., Berlin, Pa.
Phœnix Iron Co., 115 Dearborn st. (Room 83), Chicago, Ill.; Phœnixville, Pa.
Pierson & Co., 24-27 West st., N. Y.
Pierson, C. L., & Co., 16 Exchange pl., N. Y.
Pine Lake Iron Co., 92 Dearborn st., Chicago, Ill.
Plunkett, J. W., 474 Hamilton av., B'klyn, N. Y.
Pomeroy Machine Co., Pomeroy, O.
Pope, Thomas J., & Bro., 292 Pearl st., N. Y.
Porter, Lansing L., 102 E. Washington st. (Room 7), Chicago, Ill.
Porter, J. W., & Co., 413 Wood st., Pittsb'gh, Pa.
Portsmouth Iron & Steel Co., 18 Sycamore st., Cincinnati, O.
Potts, H. T., & Co., 215 N. 2d st., Phila., Pa.
Pottstown Iron Co., Pottstown, Pa.
Poulson & Eger, 216 W. 23d st., N. Y.
Poulterer, J. C. Co., 216 S. 4th st., Phila., Pa.
Powell & Weyer, Madison, Ind.
Pratt, E. & Bro., 23 S. Charles st., Balto., Md.
Pratt & Inman, Worcester, Mass.
Presumpscot Iron Co., Deering, Me.
Priest, Page & Co., 145 Franklin st., Boston, Mass.
Prowitt, J. T., Norwalk, Conn.
Pugh, R. H., 115 Dearborn st. (Room 92), Chicago, Ill.
Pugsley & Chapman, 8 Liberty st., N. Y.
Pullman Iron & Steel Co., Pullman, Ill.
Quincy, John W., & Co., 98 William st., N. Y.
Reed, Stickney & Co., 11 S. Gay st., Balt., Md.
Rehr, G., Dayton, O.
Richards, Daniel W., & Co., 88 to 96 Mangin st., N. Y.
Richards, J. J., & Co., 276 W. 25th st., N. Y.
Richardson, C. T., 41 Fulton st., Boston, Mass.
Richardson, J. O., 238 3d st., Phila., Pa.
Ripley & Bronson, 907-911 N. Main st., St. Louis, Mo.
Rhoae, E. & C. B., Peoria, Ill.
Robinson & Orr, 115 Water st., Pittsburgh, Pa., 72.
Rockey Bros. & Forbes, Miamisburg, O.
Rogers, W. C , Manchester, N. H.
Rogers, Brown & Co., 8 Wiggins Blk., Cincinnati, O.
Rogers, J. & J Iron Co., Jay st., N. Y.
Rogers & Sheldon, 240 Congress st., Boston, Mass.
Roover Iron Co., Roanoke, Va.
Ross, J. W., 125 Dearborn st., Chicago, Ill.
Rowland, J. & Co., 22 Central st., Boston, Mass.
Royer, J. Williamsburg, Pa.
Rundle, Spence & Co., 91 W. Water st., Milwaukee, Wis.
Russia Cement Co., Gloucester, Mass.
Ryerson, J. T. & Son, 18 Milwaukee av., Chicago, Ill.
St. Joseph Iron Co., St. Joseph, Mo.
Samuel, A., 253 Springfield av., Newark, N. J.
Samuel, E. & Co., 330 Walnut st , Phila., Pa.
Sanderson, E. P. & Co., 13 Custom House st., Boston, Mass.
Sanford & Kempel, Akron, O.
Schroeder Co., Columbus, Neb.
Schulte, G. B. & Son, 261 Main st., Cincinnati, O.
Schuylkill Haven Iron Co., Schuylkill Haven, Pa.
Scott, F. & Co., 6th av., c. Smithfield st., Pittsburgh, Pa.
Scott, James B. & Co., 122-124 2d av., Pittsburgh, Pa.
Seaton, J., Lincoln, Neb.
Seidel & Hastings Co., 183 Christopher st., N. Y.
Selby, T. H. & Co., 220-222 Mission st., San Francisco, Cal.
Seymour, C. & Co., 361 Main st., Hartford, Conn.
Sharon Iron Works, Scranton, Pa.
Sharpless, S. F. & Co., 220 S. 3d st., Phila., Pa.
Shaw, John H., 21 S. Colony st., Meriden, Conn.
Shenandoah Iron Co., Milnes, Va.
Shepard & Co., 147 High st., Boston, Mass.
Shirmer, Samuel M., 68 Grand Arcade, Cleveland, O.
Simon, A. & Co., 227 Croghan st., Detroit, Mich.
Simon & Wilson, 1911 N. 2d st., Phila., Pa.
Simons, S. & Son, 371 Atwater st., Detroit, Mich.
Sites, Wheeler & Co., 222 S. 3d st., Phila., Pa.
Sligo Iron Store Co., 945 N. 2d st., St. Louis, Mo.
Smith, E A., Nashua, N. H.
Smith, E. D., 147 S. 4th st., Phila , Pa.
Smith, W. H. & Co , 15-17 Water st., Norwalk, Conn.
Snead & Co., Iron Works, 205 La Salle st., Chicago, Ill.
Snyder, J., Wheeling, W. Va.
Soule & Staub, New Milford, Conn.
Souther, E. E. & Bro., 936 N. 2d st., St. Louis, Mo.
Spearman Iron Co., Sharpsville, Pa.
Spittall, Geo. P. & Co., 313½ Walnut st , Phila., Pa.
Spring Lake Iron Co., 406 Milwaukee st., Milwaukee, Wis.
Springfield Iron Co., 115 Dearborn st. (Room 44), Chicago, Ill.
Stambaugh, J., Youngstown, O.
Standard Nail & Iron Co., 5th, c. Main st., Cincinnati, O.
Stanley, J. C., Newburyport, Mass.
Steele, Birdwell & Ford, Minneapolis, Minn.
Stephen & Jones, 680 N. Broad st., Phila., Pa.
Stetson, Geo. W. & Co., 69 Wall st , N. Y.
Stevens, A. E. & Co., Portland, Me.
Stewart Iron Co., Scranton, Pa.; Uniontown, Pa.
Stiles, Thos. W. & Co., 130 Water st., N. Y.
Stous, E. R., Dayton, O.
Stowell, G. H., Claremont, N. H.
Stroud & Co., 104 John st., N. Y.
Supple, F., 195 Dorchester av., Boston, Mass.
Swanton Coal and Iron Co., Barton, Md.

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Swarts & Nathan, 551 State st., Chicago, Ill.
Taft, J. B., 4 P. O. sq., Boston, Mass.
Tay, G. H. & Co., 614 Battery st., San Francisco, Cal.
Taylor Bros. & Co,, 11 Oliver st., Boston, Mass.
Taylor & Flint, 31 Beale st., San Francisco, Cal.
Temple Iron Co., Temple, Pa.
Temple & Lockwood, 12 Platt st., N. Y.
Thomas Iron Co., Easton, Pa.
Thompson, Ashburner & Co., 25 S. Gay st., Balt., Md.
Thompson, M. A., 184 Dearborn st. (Room 3), Chicago, Ill.
Thompson, C. F., & Co., Brattleboro, Vt.
Thompson, J. H., & Co., 32 Pine st., N. Y.
Thompson & Bethune, Concord, N. H.
Tompkins, A. G., 10 Oliver st., Boston, Mass.
Traber, J., & Co., 13 W. 3d st., Cincinnati, O.
Treat, J. A., & Co., Lawrence, Mass.
Troy Steel & Iron Co., Mad., c. 1st st., Troy, N. Y.
Turnor, Thos., 21 Cortlandt st., N. Y.
Tyler Bros., 8 Oliver st., Boston, Mass.; 12 14 Cliff st., N. Y.
Valentine, E. M., 261 S 4th st., Phila., Pa.
Valentine & Armstrong, 226 S. 4th st., Phila., Pa,
Van Camp Hardware & Iron Co., Indianapolis, Ind.
Van Santvoord, J., Cohoes, N. Y.
Van Winkle, I. S. & Co., 315 Market st., San Francisco, Cal.
Varick, J. B. Co., Manchester, N. H.
Vought & Williams, 194 West st., N. Y.
Walbaum, W. H., & Co., 206 S. 4th st., Phila., Pa.
Wales, G. O., & Co., 70 Kilby st., Boston, Mass.
Wales, Wales & Co., 19 Pearl st., Boston, Mass.
Walker & Co., Concord, N. H.
Walker & Nutting, 74-76 Bank st., Waterbury, Conn.
Wallace, D. W., & Co., Leetonia, O.
Wallace, Wm. H., & Co., 131 Wash'n st., N. Y.
Walsh & Son, 260 Wash'n st., Newark, N. J.
Ward, E. T., 140 Fulton st., Boston, Mass.
Ward & Byrne, 451 B'way, Albany, N. Y.
Wardwell, R. P., & Co., 6 Harrison st., N. Y.
Warner, L. E., 13 Johnston Bldgs., Cincinnati, Ohio.
Warr, J. C., 45 Dorchester st., Boston, Mass.
Warr, J. C., Wareham, Mass.
Warren, J. M., & Co., 243 River st., Troy, N. Y.
Warren, Salisbury & Nightingale, Exchange st., c. Exchange pl., Providence, R. I.
Warren, Wood & Co., 115 B'way, N. Y.
Warwick Iron Co., Pottstown, Pa.
Waterman-Campbell Iron Co., 809 N. Main st., St. Louis, Mo.
Watts, A. & Co., 95 5th av., Pittsburgh, Pa.
Watts, E. & Co., 220 S. 3d st., Philadelphia, Pa.
Weber & Co., 360 Main st., Cincinnati, O.
Webster, F. I., Turner's Falls, Mass.
Webster & Crosby, 99 Foster st., Worcester, Mass.
Weed Iron and Mining Co., Weed Mines, N. Y.
Weldon, S. A. & Son, Bristol, Conn.
Wells, B. W., 40 Dearborn st. (Room 7), Chicago, Ill.
Wessel, A., 53 W. 2d st., Cincinnati, O.
Wetmore & Co., 365 Greenwich st., N. Y.
Wheeler, E. S., & Co., 26 Crown st., New Haven, Conn.
Wheeler Metal Co., 191 High st., Boston, Mass.
Whitaker, W. M., 52 N. Front st., Phila., Pa.
Whitaker & Co., Toledo, O.
Whiting, Augustus H., 468 Cherry st., N. Y.
Whitney, A. R. & Co., 17 B'way, N. Y.
Whitney & Marshall, 23 Fremont st., San Francisco, Cal.
Whittaker Iron Works, 123 Dearborn st., Chicago, Ill.
Whittemore, H. & Co., 58 William st., N. Y.
Wickersham, S. M., 708 Penn av., Pittsb'gh, Pa.
Wiener, D. & Son, 250 Exchange st., Buffalo, N. Y.
Wilder, G. G., Jr., 70 Kilby st., Boston, Mass.
Wilder, W. & Son, St. Johnsbury, Vt.
Wilkinson, A. J. & Co., 184 Washington st., Boston, Mass.
Wilkinson, G. B. & Co , 216 S. 3d st., Phila., Pa.
Williams, G. W. A., 22 Central st., Boston, Mass.
Williams, I. S., 232 Dock st., Phila., Pa.
Williams, J. M. W., 22 Central st., Boston, Mass.
Williams, P. & G. M., 13 State st., New London, Conn.
Williams Bros., Akron, O.
Williamson, James & Co., 63 Wall st., N. Y.
Wilmot & Hobbs Mfg. Co., Railroad, c. Hancock av., Bridgeport, Conn.
Wilson, J. B., 209 S. 3d st., Phila., Pa.
Wilson, E. H. & Co., 224 S. 3d st., Phila., Pa.
Windsor Locks Steel Co., Housatonic av., n. Congress st., Bridgeport, Conn.; Windsor Locks, Conn.
Winternitz, C. & Sons, 319 W. Pratt st., Balto., Md.
Winternitz, S. G. & Bro., 306 W. Camden st., Balto., Md.
Winthip, H. A., Bradford, Vt.
Wister, F., 400 Chestnut st., Phila., Pa.
Wister, L. & R. & Co., 257 S. 4th st., Phila., Pa.
Witherbees, Sherman & Co., 40 Wall st., N. Y.
Wittemann Brothers, 192 Fulton st., N. Y.
Wolff & Co., 584 Central av., Cincinnati, O.
Wood, J. & Bros., Conshohocken, Pa.
Woodruff, Frank H. & Co., 28 West st., N. Y.
Wood, A. & Co., Conshohocken, Pa.
Worthington, G. Co. (The), 59 St. Clair st., Cleveland, O.
Wright, I. C. & Co., Fitchburg, Mass.
Wyeth, W. N., Lombard, c. Charles st., Balto., Md.

Iron—Muck Bar.

Cherry Valley Iron Works, Leetonia, O.
Chickies Rolling Mill Co., Chickies, Pa.
Douglassville Iron Co., (Ltd.), Douglassville, Pa.
Eagle Rolling Mill and Tube Works (J. W. Friend & Co.), Pittsburgh, Pa.
Franklin Iron Works (Geo. Youtz), Brickerville, Pa.
Harrisburg Nail Works, Harrisburg, Pa.
Keystone Iron Works (Ltd.), Reading, Pa.
Kittanning Iron Co. (Ltd.), Kittanning, Pa.
La Belle Iron Works, Wheeling, W. Va.
Lebanon Iron Co., Lebanon, Pa.
Lebanon Rolling Mills (Sam'l E. Light), Lebanon, Pa.
Longmead Iron Works (Jawood Lukens), Conshohocken, Pa.
Mahoning Valley Iron Co., Youngstown, O.
Mohr, J. J., 131 4th st., Phila., Pa.
Northumberland Iron and Nail Works (Van Alen & Co.), Northumberland, Pa.
Pennsylvania Iron and Steel Works (W. J. Hammond & Sons) (Ltd.), Pittsburgh, Pa.
Phila. and Reading Coal and Iron Co., Reading, Pa.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Potsgrove Iron Works (Potts Bros. Iron Co.) (Ltd.), Pottstown, Pa.
Pottstown Iron Co., Pottstown, Pa.
Sable Iron and Nail Works (Zug & Co.) (Ltd.), Pittsburgh, Pa.
Safe Harber Rolling Mill (Phœnix Iron Co.), 410 Walnut st., Phila., Pa.
Scottdale Iron Works, Scottdale, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. 3.
Stewart Iron Co. (Ltd.), Sharon, Pa.
Valentine Ore Land Asso., Bellefonte, Pa.

Iron Ore.

Addy, Mathew & Co., Room 1 Pike's Bldg., Cincinnati, O.
Akron Iron Mining Co., 231 Bank st., Cleveland, Ohio.
Am. Metal Co., 80 Wall st., N. Y.
Arnold Furnace Co., 41 Atwater Bldg., Cleveland, O.
Atlas Iron Mining Co., 29 Euclid av., Cleveland, Ohio.
Axworthy, T., 122 Water st., Cleveland, O.
Bass Furnace Co., Stock's Mills, Ala.
Bellfonte Ore Co., Bellefonte, Pa.

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Belvedere Iron Ore Co., 18 Park Row, N. Y.
Black Band Iron Ore Co., Post Boy, O.
Boston Mine, 233 Bank st., Cleveland, O.
Brown, Harvey H. & Co., 101 St. Clair st., Cleveland, O.
Buckeye Creek Coal and Iron Co., Columbus, O.
Cambria Mining Co., 163 E. Randolph st. (Room 9), Chicago, Ill.
Champion Iron Co., 101 St. Clair st., Cleveland, Ohio.
Chapin Mining Co., 9 Nat. Bank Bldg., Cleveland, Ohio.
Chateau Ore and Iron Co., Plattsburgh, N. Y.
Cheshire Iron Co., Sharpsville, Pa.
Chestnut Hill Iron Ore Co., Columbia, Pa.
Cheever Ore Bed Co., Cheever, N. J.
Cleveland Iron Mining Co., Superior, c. Bank st., Cleveland, O.
Collins, H. E. & Co., Lewis Block, Pittsb'gh, Pa.
Commonwealth Iron Co., 64 Wade Bldg., Cleveland, O.
Cooper, Hewitt & Co., 17 Burling sl., N.Y.; Charlotteburg, N. J.
Cope, C. W., Carpenterville, N. J.
Crocker Bros., 32 Cliff st., N. Y.
Cromwell Iron Co., 245 B'way, N. Y.
Croton Magnetic Iron Mines, 18 Park Row, N. Y.
Crowl, W. H., 121 Superior st., Cleveland, O.
Curry Iron Co., 101 St. Clair st., Cleveland, O.
Cunningham, J. S., 102 Chambers st., N. Y.
Dalliba, Hussey & Co., 101 St. Clair st., Cleveland, O.
Dunkirk Ore Co., Loveville, Pa.
Durham Furnace Co., Carpentersville, N. J.
Durkee, H. R., & Co 115 Dearborn st., Chicago, Ill.
Ely, Geo. H. & S. P., 15, 16 Merchants' Bank Bldg., Cleveland, Ohio.
Emmet Mining Co., Sharon, Pa.
Eureka Ore Co., Sinking Springs, Pa.
Flick, F. H., & Co, C. & P. Whiskey Island, Cleveland, O.
Florence-May Mining Co., 231 Bank st., Cleveland, O.
Florence Mining Co., 233 Bank st., Cleveland, O.
Glidden & Drake, 41 Atwater Bldg., Cleveland, Ohio.
Gogebic Mining Syndicate, 231 Bank Bldg., Cleveland, O.
Hanna, M. A., & Co., 101 St. Clair st., Cleveland, Ohio.
Harper, E. L., & Co., 30 W. 3d st., Cincinnati, O.
Hart, Wm. R., & Co., 226 Walnut st., Phila., Pa.
Holden, S. P., 23 Merchants' Exch., San Francisco, Cal.
Horicon Iron Co., 24 Cliff st., N. Y.
Horson, W. H., Banner, O.
Hughes, B. B., Bridgeport, Pa.
Hull, G. H., & Co., 500 W. Main st., Louisville, Ky.
Hunterdon Mining & Mfg. Co., Valley, N. J.
Hussey, Hoyt & Co., 231 Bank st., Cleveland, O.
Iron Cliffs Co., 163 E. Randolph st. (Room 9), Chicago, Ill.
Iron Mountain Co, 941 N. 2d st., St Louis, Mo.
Iron Star Co., 95 Superior st., Cleveland, O.
Jackson Iron Co, 101 St. Clair st., Cleveland, O.
Keiper, S. M., 62 Liberty st., N. Y.
Kent & Mordue, Kenyon Bldg., Louisville, Ky,
King, Gilbert & Warner, Columbus, O.
Kraner, P. H., 328 Montgomery st., San Francisco, Cal.
Lake Champlain Ore Co., Port Henry, N. Y.
Lake Superior Iron Co., 101 St. Clair st., Cleveland, O.
Lawrence Ore Co., New Castle, Pa.
Leiss, Delong & Schweyer, Fleetwood, Pa.
Leiss, L. H. & Co., Topton, Pa.
Leishman & Snyder, 605 Smithfield st., Pittsb'g, Pa.
Logan, James H., Penn Bldg., Pittsburgh, Pa. 53.
Long, Schweyer & Co., Mertztown, Pa.
Lucy Furnace Co., Carpentersville, N. J.
Luckhardt, C. A. & Co., 28 Stevenson st., San Francisco, Cal.
Lumberman's Mining Co., 115 Dearborn st., Chicago, Ill.
Lumberman's Mining Co., 101 St. Clair st., Cleveland, O.
Mack, T. A., 69 W. 3d st., Cincinnati, O.
Mahopac Iron Co., Lake Mahopac, N. Y.
Maramec Iron Mining Co., 322 Pine st., St. Louis, Mo.
Marvel, Wm. D. & Co., 70 William st., N. Y.
Metropolitan Iron & Land Co., 17 Metropolitan Blk., Chicago, Ill.
Myer, D., 212 Pine st., San Francisco, Cal.
Michigan Land & Iron Co., 17 Blackstone Bldg., Cleveland, O.
Michigamme Co., Michigamme, Mich.; 163 E. Randolph st. (Room 9), Chicago, Ill.
Midvale Ore Co., Midvale, N. J.; Wanaque, N. J.
Minnesota Iron Co., St. Paul, Minn.
Moore, George S., 423 W. Main st., Louisville, Ky.
Moose Iron Mining Co., 122 Walter st., Cleveland, O.
Nanaimo Mining Co., 233 Bank st., Cleveland, Ohio.
National Iron Mine, 233 Bank st., Cleveland, O.
Naylor & Co., 99 John st., N. Y.
New Castle Coal Mines, Hanging Rock, O.
New Jersey Iron Mining Co., Dover, N. J.
Ohio River Iron, Coal and Flux Co., 17½ W. 3d st., Cincinnati, O.
Orr, F. D. & Co., 236 Superior st., Cleveland, O.
Outhwaite, J. H., & Co., 101 St. Clair st., Cleveland, O.
Penn Iron Mining Co., 218 S. 4th st., Phila., Pa.
Philadelphia and Reading Coal and Iron Co. (The), 227 S. 4th st., Philadelphia, Pa.
Pickands, Mather & Co., Superior, c. Bank st., Cleveland, O.
Pickards, Brown & Co., 115 Dearborn st., Chicago, Ill.
Pierce, J. J., Sharpsville, Pa.
Pittsburgh and Lake Angevine Iron Co., 101 St. Clair st., Cleveland, O.
Pope, E. C., Wade Bldg, Cleveland, O.
Port Henry Iron Co., Port Henry, N. Y.
Price, T., 524 Sacramento st., San Francisco, Cal.
Pullman, J. Wesley, Phila., Pa.
Ranlett, H. D., 218 California st., San Francisco, Cal.
Rapp, A., Carpentersville, N. J.
Reece, P., Carpentersville, N. J.
Republic Iron Co., Wade Bldg., Cleveland, O.
Rhoades & Smith, Loveville, Pa.
Richards Bros., 107 Dearborn st. (Room 20). Chicago, Ill.
Rider, W. E., 18 Park Row, N. Y.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. 72.
Rogers, Brown & Co., 8 Wiggins Blk., Cincinnati, O.
Runkle & De Hart, Valley, N. J.,
Runyon, Stubbs & Mack, 141 Dearborn st., Chicago, Ill.
St. Louis Ore and Steel Co., 402 Market st., St. Louis, Mo.
Schweyer & Leiss, Bower's Station, Pa.
Smith Mine, Mineville, N. J.
Southern Ohio Coal and Iron Co., Dayton, O.
Standard Iron Co., 134 S. 4th st., Phila., Pa.
Standard Iron Mining Co, 29 Euclid av., Cleveland, O.
Sterling Iron Ore Co., Geddes, N. J.
Stevenson A. M., 214 California st., San Francisco, Cal.
Sterling Iron Co., 65 Wilshire Bldg., Cleveland, O.
Stewart Iron Co. (Ltd.), 101 St. Clair st., Cleveland, O.
Stroud & Co., 104 John st., N. Y.
Taylor Iron Co., 233 Bank st., Cleveland, O.
Thompson, J. H. & Co., 32 Pine st., N. Y.
Tod, Stambaugh & Co., 233 Bank st., Cleveland, O.
Traber, J. & Co., 13 W. 3d st., Cincinnati, O.
Tuttle, Oglebay & Co., 15 Wade Bldg., Cleveland, O.
Underwood, A., Mechanicsburg, Pa.
Walbaum, W. H. & Co, Phila., Pa.
Webster Iron Mine, 11 Wade Bldg., Cleveland, O.
West End Co., Valley, N. J.
Wheat Iron Mining Co., 164 Bank st., Cleveland, O.

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Williams' Coal and Iron Co., 42 Atwater Bldg., Cleveland, O.
Witherbees, Sherman & Co., 40 Wall st., N. Y.; Port Henry, N. Y.
York Mining Co., 17 Merwin st., Cleveland, O.
Zanesville Iron Mining Co., 12 Atwater Bldg., Cleveland, O.

Iron Work—Ornamental.

Architectural Iron and Metal Works, 288 Dyer st., Providence, R.
Bakewell & Mullins, Salem, O.
Champion Iron Fence Co., Kenton, O.
Chelmsford Foundry Co., North Chelmsford, Mass.
Cooper, E. C. & Co., 39th st. and Woodland av., Phila., Pa.
Dean, Linus, Utica, N. Y.
Dimond, J. G. & T., 209 W. 33d st., N. Y.
Freeman, Stephen & Sons, Racine, Wis.
Fiske, J. W., 26 Park pl., N. Y.
Hecla Bronze and Iron Works, 216 W. 23d st, N. Y.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Koehn & Lutke, 134-136 W. 26th st., N. Y.
Manly & Cooper Mfg. Co., 271 Broadway, N. Y.; 4150 Elm av., Phila., Pa.
Messmer, Andrew, 61 Coleman st., Cincinnati, O.
Mott, J. L., Iron Works (The), 88-90 Beekman st., N. Y.
National Wire and Iron Co., c. Congress and 4th st., Detroit, Mich.
Oakes Mfg. Co., 111 Washington st., Boston, Mass.
Ornamental Iron Works Co., Toledo, O.
Palmer, Thos. G., 138 Front st., Rochester, N. Y.
Pettit, David & Co., 1217-1229 Callowhill st., Phila., Pa.
Westervelt, A. B. & W. P., 102 Chambers st., N. Y.

Iron—Black Oxide.

Cooper, Charles & Co., 194 Worth st., N. Y.
Eastwood, John, Bellville, N. J.
Fenchtwanger, L. & Co., 191 Fulton st., N. Y.

Iron—Red Oxide.

Cooper, Chas. & Co., 194 Worth st., N. Y.
Fenchtwanger & Co., 191 Fulton st., N. Y.

Iron—Pig.

Alice Furnace Co., Birmingham, Ala.
Allentown Rolling Mills, Allentown, Pa.
Andrews & Hitchcock, Youngstown, O.
Baird Iron Co., Gore, O.
Barnum, Richardson & Co., Salisbury, Conn.
Bass Furnace Co., Rock Run, Ala.
Bellaire Nail Works, Bellaire, O.
Benson & Cottrell, Chickies, Pa.
Brier Hill Iron & Coal Co., Youngstown, O.
Brooke, I. & G., Iron Co., Birdsboro', Pa.
Carrie Furnace Co. (The), Pittsburgh, Pa.
Central Iron Works, Helena, Ala.
Charlotte Iron Works, 15 Power's Blk., Rochester, N. Y.
Chickies Iron Co., Chickies, Pa.
Clare, J. D., & Co., Portsmouth, O.
Clifton Iron Co., Jenifer, Ala.
Collins, H. E., & Co., 605 Smithfield Blk., Pittsburgh, Pa.
Colorado Coal & Iron Co., South Pueblo, Col.
Condit, Fuller & Co., Cleveland, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Crane Iron Co., 224 S. 4th st., Phila., Pa.
Crockett & Co., Crockett Depot, Va.
Deer Lake Co., Ishpenning, Mich.
Donaldson Iron Co., Emaus, Pa.
Durkee, H. R., & Co., 115 Dearborn st., Chicago, Ill.
Edwards Iron Co., Woodstock, Ala.
Everett Iron Co., Bedford, Pa.
Franklin Iron Mfg. Co., Franklin Iron Works, N. Y.
Furnaceville Iron Co., Ontario, N. Y.
Gaylord Iron Co., Detroit, Mich.
Gill, Thompson, C., & Co., 210 S. 3d st., Phila., Pa.
Girard Iron Co., Girard, O.
Globe Iron Co., Jackson, O.
Gridley, Noah & Son, Wassaic, N. Y.
Hart, William R., & Co., 226 Walnut st., Phila., Pa.
Hart, Wm. R., & Co., 402 Walnut st., Phila., Pa.
Hecla Iron and Mining Co., Ironton, O.
Herron, John B., 419 Wood st., Pittsburgh, Pa.
Hileman, Waring & Co., Clifton Forge, Va.
Jefferson Iron Works, Steubenville, O.
Judson, B. F., 457 Water st., N. Y.
Keefer, Horace A., & Co., Kansas City, Mo. **88.**
Kunkee, J. B., Catoctin Furnace, Md.
Logan, James H., Penn Bldg., Pittsburgh, Pa. **58.**
Lyman, Frank, 130 Water st., N. Y.
Lynchburg Iron Co. (The), Lynchburg, Va.
Meysenburg, O. W., & Co., Phœnix Bldg., Chicago, Ill.
Miles, T. J. & Co., Danville, Pa.
Missouri Furnace Co. (The), Gay Bldg., St. Louis, Mo.
Mohr, J. J., 131 S. 4th st., Phila., Pa.
Montour Iron and Steel Co., Danville, Pa.; 216 S. 3d st., Phila., Pa.; Reading, Pa.
Musconetcong Iron Works, Stanhope, N. J.
Mary Pratt Furnace Co., Birmingham, Ala.
Macungie Iron Co., Macungie, Pa.
National Furnace Co., De Pere, Wis.
Neal Bros., 612 Liberty st., Pittsburgh, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Blk., Chicago, Ill.
Pancoast & Rogers, 28 Platt st., N. Y.
Penn Iron and Coal Co. (The), Canal Dover, O.
Pine Lake Iron Co., 90-92 Dearborn st., Chicago, Ill.
Pottstown Iron Co., Pottstown, Pa.
Reed Island Iron Co., Reed Island, Va.
Richmond Iron Works, Richmond Furnace, Mass.
Riverside Iron Works, Wheeling, W. Va.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. **72.**
Round Mountain Iron Works, Round Mountain, Ala.
Sharpsville Furnace Co., Sharpsville, Pa.
Shelby Iron Co., Shelby Iron Works, Ala.
Shoenberger, Speer & Co., Pittsburgh, Pa.
Sloss Furnace Co., Sloss, Ala.
Star Furnace Co., Jackson, O.
Stroud & Co., 104 John st., N. Y.
Troy Iron Works, Troy, Ala.
Tuttle, Oglebay & Co., Wheeling, W. Va.
Union Iron Co., Detroit, Mich.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Williamson, James & Co., 63 Wall st., N. Y.
Woodstock Iron Co., Anniston, Ala.

Iron Piling.

Pease, P., 177 La Salle st., Chicago, Ill.

Iron Plates.

Ætna Iron and Steel Co., Bridgeport, O.
Allegheny, Monongahela and Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
American Iron & Steel Works (Jones & Laughlins), Pittsburgh, Pa.
American Nail and Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Anchor Iron and Steel Works (L. M. Dayton), 94 W. 2d st., Cincinnati, O.
Anchor Nail and Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Arethusa Iron Works (Geo. W. Johnson), New Castle, Pa.
Bassett & Presley, Cleveland, O.
Bethlehem Iron Co., Bethlehem, Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.
Brandywine Rolling Mills (Worth Bros.), Coatesville, Pa.
Brennan, John & Co., 194 Larned st., Detroit, Mich.

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Britton Iron and Steel Co., Cleveland, O.
Buckley, Edward S., 209 S. 3d st., Phila., Pa.
Burdick, Norman & Son, Albany, N. Y.
Burgess Steel and Iron Works, Portsmouth, O.
Byers, A. M. & Co., Pittsburgh, Pa.
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Carmichael & Emmens, 130 Cedar st., N. Y.
Catasauqua Mfg. Co., Catasauqua, Pa.
Central Iron Works, Harrisburg, Pa.
Chess, Cook & Co., Pittsburgh, Pa.
Chester Rolling Mills, Thurlow, Pa.
Christiana Rolling Mill Co., Wilmington, Del.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton & Millvale Rolling Mills (Graff, Bennett & Co.), Pittsburgh, Pa.
Coatesville Iron Works, Coatesville, Pa.
Condit, Fuller & Co., 122 Water st., Cleveland, Ohio.
Conshohocken, Penna. & Corliss Iron Works (J. Wood & Bros. Co.), 223 N. 3d st., Phila., Pa.; Conshohocken, Pa.
Cooney, Daniel F., 88 Washington st., N. Y.
Cumberland Rolling Mill, Mount Clare, Balt., Md.
Cunningham Iron Works Co., 109 Milk st., Boston, Mass.
Damerel, Geo., 82 John st., N. Y.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.; New Castle, Del.
Dickson Mfg. Co., Scranton, Pa.
Dominion Bridge Co. (Ltd.), Lachine, P. Q., and Toronto, Ont.
Eagle Iron Works (Curtins & Co.), Roland, Pa.
Elmira Iron and Steel Rolling Mill Co., Elmira, N. Y.
Eureka Iron and Steel Works, Wyandotte, Mich.
Eureka Iron and Steel Works, Detroit, Mich.
Ewald Iron Co., 801 N. 2d st., St. Louis, Mo.
Gibraltar Iron Works (Simon Seyfert & Co.), Reading, Pa.
Glasgow Iron Co., Pottstown, Pa.
Globe Nail Co., Boston, Mass.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Globe Rolling Mill Co., Cincinnati, O.
Gray's Ferry Iron Works (Edward S. Buckley), 209 S. 3d st., Phila., Pa.
Hartley, J. H., 13 Tallapoosa st., Montgomery, Ala.
Hussey, Howe & Co., Pittsburgh, Pa.
Huston, Charles & Sons, Coatesville, Pa.
Ironton Rolling Mill (N. Y. & Ohio Iron & Steel Co.), Ironton, O.
Jarboe, J. & Son, 519 E. 19th st., N. Y.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Kensington Iron & Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Keystone Iron Works (Ltd.), Reading, Pa.
Kimberly, P. L. & Co., Sharon, Pa.
Laclede Rolling Mills (Chouteau, Harrison and Valle Iron Co.), St. Louis, Mo.
Lappan, James & Co., Pittsburgh, Pa.
Laurel Iron Works, Coatesville, Pa.
Lebanon Rolling Mills (Samuel E. Light), Lebanon, Pa.
Leechburg Iron Works (Kirkpatrick & Co., Ltd.), Leechburg, Pa.
Licking Rolling Mill Co., Covington, Ky.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lloyd, H., Son & Co., Pittsburgh, Pa.
Locust Point Iron & Steel Works (Coates & Co.), Baltimore, Md.
Lukens Rolling Mills (Chas. Huston & Sons), Coatesville, Pa.
McIlvain, Wm., & Sons, Reading, Pa.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Maumee Rolling Mill Co., Toledo, O.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Mitchell, Tranter & Co., 2d & Elm sts., Cincinnati, O.
Mount Hope Iron Works, Somerset, Mass.
Moorhead-McCleane Co., Pittsburgh, Pa.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
National Tube Works Co., McKeesport, Pa.
New Philadelphia Iron & Steel Co., New Philadelphia, Pa.
Northumberland Iron & Nail Works (Van Alen & Co.), Northumberland, Pa.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Ohio Falls Iron Works, New Albany, Ind.
Pancoast & Rogers, c. Gold & Platt sts, N. Y.
Parkesburg Iron Co., Parkesburg, Pa.
Paterson Iron Co., Paterson, N. J.
Paxton Rolling Mills, Harrisburg, Pa.
Pennock, C. E., & Co., Coatesville, Pa.
Penn Treaty Iron Works (Marshall Bros. & Co.), 24 Girard av., Phila., Pa.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington, Phila., Pa.
Pine Iron Works (Jos. L. Bailey & Son), Pine Iron Works P. O., Pa.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Portsmouth Iron & Steel Works, Portsmouth, Ohio.
Pottsgrove Iron Works, (Potts Bros. Iron Co., Ltd.), Pottstown, Pa.
Pottstown Iron Co., Pottstown, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Reeves Bros., Niles, O.
Republic Iron Works (Ltd.), 1st av. & Smithfield st., Pittsburgh, Pa.
Riverside Iron & Steel Co. (The), c. 4th & Main sts., Cincinnati, O.
Schoenberger & Co., Pittsburgh, Pa.
Schuylkill Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.
Seidel & Hastings Co. (The), Wilmington, Del.
Seyfert Rolling Mills (Samuel R. Seyfert), Reading, Pa.
Sharon Iron Co., Sharon, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. **3.**
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.
Soho Iron Mills (Moorhead-McCleane Co. (Pittsburgh, Pa.
Spaulding Iron Co. (The), Brilliant, O.
Springfield Iron Co.'s Iron and Steel Works, Springfield, Ill.; 10 Wall st., N.; 115 Dearborn st., Chicago, Ill.
Stony Creek Iron Co. (Ltd.), Norristown, Pa.
Stroud & Co., 104 John st., N. Y.
Swifts' Iron and Steel Works, Newport, Ky.
Thorndale Iron Works Co., Thorndale, Pa.
Tremont Nail Co., West Wareham, Mass.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.
U. S. Iron and Tin Plate Co. (Ltd.), Demmler, Pa.
Valley Iron Works (C. E. Pennock & Co.), Coatesville, Pa.
Vesuvius Iron and Nail Works (Moorhead Bro. & Co., Pittsburgh, Pa.
Wayne Iron and Steel Works (Brown & Co.), Pittsburgh, Pa.
Warner, A. B. & Son, 28 West st., N. Y.
Wellsville Plate and Sheet Iron Co., 111 Water st., Pittsburgh, Pa.; Wellsville, O.
Wilder, G. G. Jr. (Agent), 70 Kilby st., Boston, Mass.
Wilfong Bros., 222 N. 23d st., Phila., Pa.
Wilmington Rolling Mills (Seidel & Hastings Co.), Wilmington, Del.
York Rolling Mill (Schall, Steacy & Denney), York, Pa.

Iron—Puddle Bars.

Stony Creek Iron Co. (Ltd.), Norristown, Pa.

Iron—R. R. Car.

Birmingham Rolling Mill Co., Birmingham, Ala.
Central Iron and Steel Co., Brazil, Ind.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Eagle Iron Works, Terre Haute, Ind.
Iowa Rolling Mill Co., Burlington, Ia.
Keystone Iron Works (Ltd.), Reading, Pa.
Old Dominion Iron and Nail Works Co., Richmond, Va.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.

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Peacock, Geo., Selma, Ala.
Pullman Iron and Steel Co., Pullman, Ill.; Pullman Bldg., Chicago, Ill.
Sharon Boiler Works, Sharon, Pa.
Swift's Iron and Steel Works, Newport, Ky.
Way Foundry Co., Phila., Pa.

***Iron—Refined.**

Cuyahoga Iron and Stay Bolt Co., Cuyahoga Falls, O.
Pomeroy Iron and Steel Co., Pomeroy, O.

Iron—Rods and Round.

Ætna Nut Co., Southington, Conn.
Altoona Iron Co., Altoona, Pa.
American Bolt Co., 270 Lawrence st., Lowell, Mass. **24.**
American Wire Co. (The), Lake, c. Marquette st., Cleveland, O.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Blandon Rolling Mill Co., Blandon, Pa.
Braddock Wire Co., Pittsburgh, Pa.
Brown & Bros. Tubing and Boiler Works, Waterbury, Conn.
Bush & Belknap, East Branch, Pa.
Cambridge Rolling Mills, Cambridgeport, Mass.
Cass Mfg. Co. (The), Lima, O.
Chapman, Gideon, Bradford, Pa.
Champion Steel and Iron Works, Springfield, O.
Chicago Forge and Bolt Co., 234 S. Clark st., Chicago, Ill.
Chrome Steel Works, Brooklyn, E. D., N. Y.
Clark, D. W., Tidioute, Pa.
Coldspring Iron Works (Mitchell Bros.), Norwich, Conn.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Collins, H. E. & Co., Lewis Blk., Pittsburgh, Pa.
Curtins & Co., Roland, Pa.
Delaware Rolling Mill (F. P. Howe), Phillipsburg, N. J.
Dover Iron Works, Dover, N. J.
Franconia Iron and Steel Works, Wareham, Mass.
Geider, M. C., Rowlesburg, W. Va.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Haskell, Wm. H., Co., Pawtucket, R. I.
Helmbacher Forge and Rolling Mill Co., St. Louis, Mo.
Iowa Rolling Mill Co., Burlington, Ia.
Jersey City Spike and Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Kimberly, P. L. & Co., Sharon, Pa.
Lewander & Co., 126 State st., Boston, Mass.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Michigan Bolt and Nut Works, Detroit, Mich.
Milton Rolling Mill and Steam Forge (Milton Iron Co.), Milton, Pa.
New Haven Rolling Mill Co., New Haven, Conn.
Norway Steel and Iron Co., 6 Oliver st., Boston, Mass.
Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington st., Phila., Pa.
Sable Iron Works (J. & J. Rogers Iron Co.), Ausable Forks, N. Y.
Standard Rolling Mill (Strothman Bros.), Minneapolis, Minn.
Star Iron Works (Bowen & Signor), Saranac, N. Y.
Thames Iron Works, Norwich, Conn.
Trenton Iron Co., Trenton, N. J.
Ulster Iron Works (Wm. Mulligan), Saugerties, N. Y.
Virginia Nail and Iron Works Co., Lynchburg, Va.
Washburn & Moen Mfg. Co., Worcester, Mass.
Westerman Rolling Mill (Westerman & Co.), Lockport, N. Y.

Iron—Scrap.

Altfelt, M., 292 Hamilton st., Cleveland, O.
Arnstein & Lewith, 1336 Forest st., Cleveland, O.
Bayliss, J. E., Hartfort, Conn.
Block, D., 286 Cedar st., Buffalo, N. Y.
Block, Pollock & Co., 1600 Wentworth av., Chicago, Ill.
Block & Pollock, 3d, c. Plum st., Cincinnati, O.
Brown, D. D., Co., 63-71 Jay st., Utica, N. Y.
Buckingham, J. W., York, Pa.
Burns & Co., 1135 N. Main st., St. Louis, Mo.
Burnstein, A. & Son, 45 S. Canal st., Chicago, Ill.
Bussenius & Cunliffe, 1142 Washington av., Phila., Pa.
Canedy, W. E., Rochester, Minn.
Cambridge Rolling Mills, Cambridgeport, Mass.
Carroll, Richard, 387 South st., N. Y.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Coates, W., 29 Adams (Fkd.) st., Phila., Pa.
Cohn, C., 248 B'way, Cleveland, O.
Collins, H. E. & Co., 34 Lewis Block, Pittsburgh, Pa.
Cragen & Hils, 264 Broadway, Cincinnati, O.
Danvers Iron Works (Arthur G. Tompkins & Co.), 10 Oliver st., Boston, Mass.
Danvers, Robt. E., 518 E. 17th st., N. Y.
Dempsey, Michael J., 402 Eleventh av., N. Y.
Deutsch, A. S. & Co., 417 Merwin st., Cleveland, O.
Devlin, J., 916 York st., Phila., Pa.
Dolan, M. & Bro., 429 Garden st., Phila., Pa.
Donnelly, M. & Co., 134 Leroy st., N. Y.
Duffy & Rourke, Whiskey Island, Cleveland, O.
Dunn, E., 21 Water st., Cincinnati, O.
Eckboald, W. & Son, 1353 Frankford av., Phila., Pa.
Etting, Edward J., 222 S. 3d st., Phila., Pa.
Ford, T., 1532 Frankford av., Phila., Pa.
Fox, John C., 617 W. 38th st., N. Y.
Gaffney, J., 134 Leroy st., N. Y.
Gannon, M., 21 W. Canal st., Allegheny, Pa.
Garden & Co., P. R. R., Cleveland, O,
Gelb, 212 Second av., N. Y.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Gilmartin, J., 529 Canal st., N. Y.
Gledhill, T., 219 S. Front st., Phila., Pa.
Goldman, M., 29 Jackson st., Cleveland, O.
Goldstein & Sacheroff, 8 Cherry st., Cleveland, O.
Graff, J. S. & Co. (Ltd.), 4th, c. Duquesne Way, Pittsburgh, Pa.
Granback, H. & Co., 51 Laural st., Phila., Pa.
Graver, E., 554 Canal st., Cincinnati, O.
Hammond, W. J., Eleventh, c. Duquesne Way, Pittsburgh, Pa.
Hanley, John F., 362 Avenue A. N. Y.
Harrison, J., 102 2d av., Pittsburgh, Pa.
Helfman, F., 77 Seventh av., Pittsburgh, Pa.
Henning, J., 437 Allen st., Phila., Pa.
Hey, Levi, 351-355 State st., Rochester, N. Y.
Hilb & Bauer, Ramsay, c. Front st., Cincinnati, O.
Hitner, Henry A. & Sons, 2304-2316 Sergeant st., 31st Ward, Phila., Pa.
Holmes, T., 2315 Walnut st., Phila., Pa.
Howard & Son, Greenwood av., c. Market st., Allegheny, Pa.
Iron City Scrap Metal Co., 229 3d av., Pittsb'gh, Pa.
Isherwood, M., 43d, c., Keystone st., Pittsb'gh, Pa.
Jones, J. B., & Bro., 60 Morgan st., Allegheny, Pa.
Joseph, J., & Bros., 23 E. 2d st., Cincinnati, O.
Judson, Benjamin F., 235 South st., N. Y.
Kane, C., Duquesne Way & Cecil av., Pittsb'gh, Pa.
Kent & Mordue, Kenyon Bldg., Louisville, Ky.
Kipper, B., 224 Hamilton, st., Cleveland, O.
Klein & Cohn, 481 Plum st., Cincinnati, O.
Koblitz, R. C., & Co., 210 B'way, Cleveland, O.
Koehler, G. A., 8 Sawmill st., Allegheny, Pa.
Koehler & Co., Columbia, n. Pike st., Pittsb'gh, Pa.
Lehmann, Mrs. H., 39 E. Bennett st., Buffalo, N. Y.
Lieberman, A., 1507 State st., Chicago, Ill.
Lippincott, J. J., & Co., 341 Walnut st., Phila., Pa.
Logan, James H., Penn Bldg., Pittsb'gh, Pa. **53.**
McClure, J. H., 516 Beach st., Phila., Pa.

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McElwee & McInnis, Wilmington, Del.
McKenney, V., 21st, c. Smallman st., Pittsb'gh, Pa.
McNulty, P., 251 Stanton st., N. Y.
Maloney, T. J., Cecil av., n. Penn av., Pittsb'gh, Pa.
Maloney & Co., 1006 Penn av., Pittsb'gh, Pa.
Manogue, M., 107 E. Front st., Cincinnati, O.
Marshall, Lefferts & Co., 417 W. 24th st., N. Y.
Mohr, J. J., 131 S. 4th st., Phila., Pa.
Morris, S., & Co., 515 S. Canal st., Chicago, Ill.
Neil Bros., 612 Liberty st., Pittsb'gh, Pa.
Neumark & Gross, 126 Front st., N. Y.
Northwestern Iron & Metal Co., 272 S. Clinton st., Chicago, Ill.
O'Connell, P., 191 W. Front st., Cincinnati, O.
O'Donnell, J. J., Old River, c. Dey st., Cleveland, Ohio.
Ohio Iron & Metal Co., Valley Ry., n. Ontario st., Cleveland, O.
Oppenheimer, S. M., 294 Cedar st., Buffalo, N. Y.
Oppenheimer & Co., 98 Terrace st., Buffalo, N.Y.
Owens, Hugh, 521 W. 38th st., N. Y.
Pollock, A., 43 Burwell st., Cleveland, O.
Post, John, 162 W. 21st st., N. Y.
Purves, A. & Son, South, c. Penn st., Phila., Pa.
Redrup, C. G., River av., Allegheny, Pa.
Richards, Daniel M. & Co., 88 Mangin st., N. Y.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. 72.
Rolet, Pierre, 237 W. 26th st., N. Y.
Rosenthal, J., 2d st. and Montgomery av., Phila., Pa.
Sanger, A. I. & Co., 177 Merwin st., Cleveland, O.
Schwartzenberg, Hayes & Co., 101 Scranton av., Cleveland, O.
Scott, F. & Co., 605 Smithfield st., Pittsburgh, Pa.
Seymour & McDougall, 70 10th av., N. Y.
Shimer, S. N., 101 St. Clair st., Cleveland, O.
Spittall, George P. & Co., 313½ Walnut st., Phila., Pa.
Springsteed, Geo., 261 10th av., N. Y.
Stacey, J. W., 4 Sawmill av., Allegheny, Pa.
Stone Bros., 70 Merwin st., Cleveland, O.
Streny, M., 124 East st., Allegheny, Pa.
Stroud & Co., 104 John st., N. Y.
Sullivan, J. E., Liberty av., c. 22d st., Pittsb'gh, Pa.
Swarts & Nathan, 300 S. Canal st., Chicago, Ill.
Taylor, J., 318 E. Orthodox st., Phila., Pa.
Thomas, E., 1116 Frankford av., Phila., Pa.
Thomas, N. M., 36 6th st., Pittsburgh, Pa.
Union Iron and Metal Co., Cleveland, O.
Union Scrap Co., 40 Beaver av., Allegheny, Pa.
Uttenweiler, I., Madison av., c. Concord st., Allegheny, Pa.
Weil, L., 54 Bennett st., Buffalo, N. Y.
Weil, L., 30 E. Main st., Cleveland, O.
Wiener, D. & Son, 250 Exchange st., Buffalo, N. Y.
Windsor Locks Steel Co., Housatonic av., Bridgeport, Conn.
Winkler, J. & Co., 36 Main st., Cincinnati, O.
Winternitz, C. & Son, 319 W. Pratt st., Balt., Md.
Wirth, J., 89 Webster st., Allegheny, Pa.
Wise, L. & Co., 16 Main st., Cincinnati, O.
Wister, L. & R. & Co., 257 S. 4th st., Phila., Pa.
Wohl, A. & Son, 23 David st., Cincinnati, O.
Young, J. P. J., 200 S. 17th st., Pittsburgh, Pa.

Iron—Scroll.

Altoona Iron Co., Altoona, Pa.
Bristol Rolling Mill Co., Bristol, Pa.
Cold Spring Iron Works (Mitchell Bros.), Norwich, Conn.
Portage Iron Co. (Ltd.), Duncansville, Pa.
Rome Merchant Iron Mill, Rome, N. Y.
Solar Iron & Steel Works (Wm. Clark's Son & Co.), Pittsburgh, Pa.

Iron—Shaft.

Cambridge Rolling Mills, Cambridgeport, Mass.
Clark, Wm. & Co., Pittsburgh, Pa.
Pencoyd Iron Works, 261 S. 4th st., Phila., Pa.

Iron—Sheet.

Ætna Iron & Steel Co., Bridgeport, O.
Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. III.
American Iron & Steel Works (Jones & Laughlins) (Ltd.), Pittsburgh, Pa.
American Sheet Iron Co., Phillipsburgh, N. J.
Anchor Iron & Steel Works (L. M. Dayton), 94 W. 2d st., Cincinnati, O.
Apollo Rolling Mills (Apollo Iron & Steel Co.), Pittsburgh, Pa.
Apollo Sheet Iron Works (P. H. Laufman & Co.) (Ltd.), Pittsburgh, Pa.
Arethusa Iron Works (Geo. W. Johnson), New Castle, Pa.
Armstrong Bros., Springfield, O.
Aurora Iron Co., Aurora, Ind.
Beach, H. B. & Son, Hartford, Conn.
Beatty & Kipp, Youngstown, O.
Beaver Falls Iron Co., Beaver Falls, Pa.
Belmor, Geo. E., 206 Mission st., San Francisco.
Bessemer Rolling Mills, Bessemer, Ala.
Bethlehem Iron Co., Bethlehem Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Brennan, John & Co., 194 Larned st., Detroit, Mich.
Britton Iron and Steel Co., Cleveland, O.
Brown, Andrew J., 100-102 Railroad av., Paterson, N. J.
Byers, A. M. & Co., Pittsburgh, Pa.
Caldwell, B. F., 1507 Main st., Wheeling, W. Va.
Canonsburgh Iron & Steel Co., Canonsburgh, Pa.; Pittsburgh, Pa.
Carmichael & Emmens, 130 Cedar st., N. Y.
Centennial Mfg. Co., Rye, N. Y.
Chartiers Iron and Steel Co. (Ltd.), Pittsburgh, Pa.
Clark, W. J. & Co., Salem, O.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Clinton & Millvale Rolling Mills (Graff, Bennett & Co.), Pittsburgh, Pa.
Conshohocken, Pennsylvania and Corliss Iron Works (J. Wood & Bros. Co.), Conshohocken, Pa.; 223 N. 3d st., Phila., Pa.
Crescent Iron Works (Whitaker Iron Co.), Wheeling, W. Va.
Davis, G. M. & Co., 20 S. Canal st., Chicago, Ill.
Dayton, L. M., 94 W. 2d st., Cincinnati, O.
Delaware Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.
De Soto Steam Boiler Works, 1828 1st st., N., Minneapolis, Minn.
Dillon, Folwell & Co., 118 Market st., Phila., Pa.
Douglass, W. & Sons, 39 & 41 Carson st., Pittsburgh, Pa.
Dusenbury, Wm. W., 533 W. 24th st., N. Y.
Easton Sheet Iron Works (Reilly & Oliver), Easton, Pa.
Enterprise Boiler Co., Youngstown, O.
Everson, Hammond & Co., Pittsburgh, Pa.
Ewald Iron Co., 801 N. 2d st., St. Louis, Mo.
Falcon Iron and Nail Co., Niles, O.
Fleming & Hamilton, 61 3d av., Pittsburgh, Pa.
Focht, Geo., Hoboken, N. J.
Fuller, Bros. & Co., 139 Greenwich st., N. Y.
Galavan & Banner, 30 Kinzie st., Chicago, Ill.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Granite Iron Rolling Mills, St. Louis Stamping Co., St. Louis, Mo.
Grimm, Henry, Quincy, Ill.
Hartley, J. H., 13 Tallapoosa st., Montgomery, Ala.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Honack, H. & Bro., Omaha, Neb.
Irondale Rolling Mill (Banfield & Co.), Irondale, Ohio.
Ironton Rolling Mill (N. Y. & Ohio Iron and Steel Co.), Ironton, O.
Jones & Laughlins (Ltd.), 3d av., c. Try st., Pittsburgh, Pa.

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Juniata Iron and Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. 88.
Kennea, J. P. & Co., 103 E. Front st., Cincinnati, O.
Kensington Iron Works (H. Lloyd, Son & Co.), Pittsburgh, Pa.
Keystone Iron Works (Ltd.), Reading, Pa.
Kraft, Shoch & Mechling, 18 Cliff st., N. Y.
Kreiphe, Chas. & Co., Evansville, Ind.
Laclede Rolling Mills (Chouteau, Harrison and Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Leechburg Iron Works (Kirkpatrick & Co. Ltd.), Leechburg, Pa.
Lefferts, Marshall & Co., 90 Beekman st., N. Y.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Licking Rolling Mill Co., Covington, Ky.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Litchfield Car and Machine Co., Litchfield, Ill.
Logan, James H., Penn Bldg., Pittsburgh, Pa. 53.
Lyman, W. C., 49 Michigan st., Chicago, Ill.
McCullough Iron Co., Northeast, Elkton and Rowlandsville, Ind.; 1600 Washington av., Phila., Pa.
McCullum, Worrell & Mullen, Donaldsonville, La.
McDaniel & Harvey Co., S. 16th st., c. Washington av., Phila., Pa.
McKee, Anderson & Co., Beaver Falls, Pa.
McKeesport Iron Works (W. D. Wood & Co., Ltd.), 111 Water st., Pittsburgh, Pa.
Mahoning Iron Works (Brown, Bonnell & Co), Youngstown, O.
Maitland & Co., Peoria, Ill.
Marshall Bros. & Co., 1215 Beach st., Phila., Pa.
Marshallton Iron Works (John R. Bringhurst), Marshallton, Del.
Maumee Rolling Mill Co., Toledo, O.
Merry, Jno. & Co., 537-549 W. 15th st., N. Y.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Minquas Iron Works (McCullough Iron Co.), Wilmington, Del.; 1600 Washington av,, Phila., Pa.
Mitchell, Tranter & Co., 2d and Elm sts., Cincinnati, O.
Moorhead Bro. & Co., Allegheny City, Pa.
Moorhead-McCleane Co., Pittsburgh, Pa.
Murphy, John H., New Orleans, La.
National Car Roofing Co., hd. of 20th st., Wheeling, W. Va.
Newlan, John W., Pittsburgh, Pa.
New Philadelphia Iron & Steel Co., New Philadelphia, O.
Newport Rolling Mills (Marshall Iron Co.), Newport, Del.
Niles Rolling Mill (Coleman, Shields & Co.), Niles, O.
O'Brien, J., & Co., 1129-1139 N. Main st., St. Louis. Mo.
Old Fort Iron Mills, Brownsville, Pa.
Oliver & Co., Easton, Pa.
Penn Treaty Iron Works (Marshall Bros. & Co.), 24 Girard av., Phila.. Pa.
Peters Hardware Co., Emporia, Kans.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Portsmouth Iron & Steel Works, Portsmouth, Ohio.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rees & Thorn, Duquesne Way & 1st st., Pittsburgh, Pa.
Reeves Bros., Niles, O.
Republic Iron Works (Ltd.), 1st av. & Smithfield st., Pittsburgh, Pa.
Riter & Conley, Pittsburgh, Pa.
Riverside Iron & Steel Co., Cincinnati, O.
Rohan Bros., Boiler Mfg. Co., 1104-1120 Collins st., St. Louis, Mo.
Russia Sheet Iron Mills (Falcon Iron & Nail Co.), Niles, O.
St. Louis Stamping Co., Cass av. & 2d st., St. Louis, Mo.
Schuylkill Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.
Scott, James B., & Co., 122-124 2d av., Pittsb'gh, Pa.
Scottdale Iron Works, Scottdale, Pa.
Sharon Iron Co., Sharon, Pa.
Shepperd, Francis, Fordham, N. Y.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.
Soho Iron Mills (Moorhead-McCleane Co.), Pittsburgh, Pa.
Sotter Bros., Pottstown, Pa.
Southwell, Wm., & Son, Cleveland, O.
Springfield Iron Co.'s Iron and Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Standard Iron Co., Bridgeport, O.
Stender, Wm. L. Pittsb'gh, Pa.
Stuart, W. J., & Son, 92 W. 2d st., Boston, Mass.
Summers Iron Works (Summers Bros. & Co.), Struthers, O.
Swift's Iron & Steel Works, Newport, Ky.
Syracuse Boiler & Sheet Iron Works, Syracuse, N. Y.
U. S. Iron & Tin Plate Co. (Ltd.), Demmler P.O., near McKeesport, Pa.
Vesuvius Iron & Nail Works (Moorhead Bro. & Co.), Pittsburgh, Pa.
Wallace, Banfield & Co., Pittsburgh, Pa.
Walters, Francis, Seneca Falls, N. Y.
Warner, A. B. & Son, 28 West st., N. Y.
Warner, Salisbury & Nightingale, Providence, R. I.
Wellsville Plate & Sheet Iron Co., Wellsville, O.; 111 Water st., Pittsburgh, Pa.
Whitaker Iron Co., 123 Dearborn st. (Room 2), Chicago, Ill.
Whitaker Iron Co., 12 Cliff st., N. Y.
Whitaker Iron Co., Wheeling, W. Va.
Wood, Alan Co., 519 Arch st., Phila., Pa.
Wood, J. & Bros., 223 N. 2d st., Phila., Pa.
Wood & Co. (Ltd.), W. D.. 111 Water st., Pittsburgh, Pa.

Iron—Skelp.

Allegheny, Monongahela and Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
Blandon Rolling Mill Co., Blandon, Pa.
Byers, A. M. & Co., Pittsburgh, Pa.
Catasauqua Mfg. Co., Catasauqua, Pa.
Columbia Iron Co., Columbia, Pa.
Columbia Rolling Mill Co., Columbia, Pa.
Cooper, Reynolds & Co., Harrisburg, Pa.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.
Eagle Rolling Mill & Tube Works (J. W. Friend & Co.), Pittsburgh, Pa.
Elba Iron & Bolt Co. (Ltd.), Pittsburgh, Pa.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Haxtun Steam Heater Co., Kewanee, Ill.
Hollidaysburg Iron & Nail Co., Hollidaysburg, Pa.
Kensington Iron & Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Keystone Horse Shoe Co., 17th & Clearfield sts., Phila., Pa.
Keystone Iron Works (Ltd.), Reading, Pa.
Keystone Rolling Mill Co. (Ltd.), Pittsburgh, Pa.
Lebanon Rolling Mills (Sam'l E. Light), Lebanon, Pa.
Mahoning Rolling Mill Co., 330 Walnut st., Phila., Pa.
Mount Hope Iron Works, Somerset, Mass.
Niles Rolling Mill (Coleman, Shield & Co.), Niles, Ohio.
Norristown Iron Works (James Hooven & Son), Norristown, Pa.
Parkersburg Iron Works, Parkersburg, Pa.
Paxton Rolling Mills, Harrisburg, Pa.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington, Phila., Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Riverside Iron Works, Wheeling, W. Va.
Seyfert Rolling Mill (Samuel R. Seyfert), Reading, Pa.
Stony Creek Iron Co. (Ltd.), Norristown, Pa.
Vesuvius Iron and Nail Works (Moorhead Bro. & Co.), Pittsburgh, Pa.

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Warren Rolling Mill, Warren, O.
West Lebanon Rolling Mill Co., Lebanon, Pa.
Wheatland Iron Co., Wheatland, Pa.
York Rolling Mill (Schall, Steacy & Denney), York, Pa.

Iron—Swedish.

Lewander & Co., Boston, Mass.
Lundberg, Gustaf, 38 Kilby st., Boston, Mass.
Lundell, Chas. G., 7 Exchange pl., Boston, Mass.
Page, Newell & Co., Boston, Mass.
Philip, C. V., 18 Liberty st., N. Y.

Irons—Tuyere.

Boots, P. H. & F. M., Connersville, Ind.
Cincinnati Plow and Bellows Works, 614 Main st., Cincinnati, O.
Empire Portable Forge Co., Cohoes, N. Y.
Illinois Iron and Bolt Co., Carpentersville, Ind.
St. Louis Malleable Iron Co., 2106-2128 Market st., St. Louis, Mo.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.

Iron—Wrought.

Carnegie, Phipps & Co. (Ltd.), Pittsburgh, Pa.
Cleveland City Forge and Iron Co., Cleveland, Ohio.
Edge Moor Iron Co., 1600 Hamilton st., Phila., Pa.; Wilmington, Del.
Missouri Valley Bridge and Iron Works, Leavenworth, Kan.
Morse Bridge Co., Youngstown, O.
Prince & Co., 410 Bleecker st., N. Y.
Warden, Henry, Germantown, Phila., Pa.
Wilforg Bros., 222 N. 23d st., Phila., Pa.

Isinglass.

Cape Ann Isinglass Co., Rockport, Mass.
Cooper's, Peter, Glue Factory, 17 Burling sl., N. Y.
Gloucester Isinglass and Glue Co., Gloucester, Mass.
Haskins Bros., Boston, Mass.
Norwood, Caleb J., Ipswich, Mass.
Weidner, P., Detroit, Mich.
Zinsser, Wm. & Co., 197 Williams st., N. Y.

Jacks.

Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Hardwicke & Ware, Buffalo, N. Y.
Illinois Iron and Bolt Co., Carpentersville, Ill.
Johnson & Bassett, Worcester, Mass.
Joyce, Cridland & Co., Wyandot and R. R., Dayton, O. **27.**
Klemm, Wm. Co. (The), 179 E. Washington st., Chicago, Ill.
Knowles Loom Works, 57 Jackson st., Worcester, Mass.
Lombard, Geo. R. & Co., Augusta, Ga.
McCoy & Sanders, 26 Warren st., N. Y.
McLagon Foundry Co. (The), 26-30 Audubon st., New Haven, Conn.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Plymouth Mills, Plymouth, Mass.
Smith, Oliver A., Clarkson, Mich.
Stafford, Geo. W. Mfg. Co., 3 & 5 Point st., Providence, R. I.
Stearns, E. C. & Co., Syracuse, N. Y.
Urquhart, John S., 46 Cortlandt st., N. Y.

Jacks—Car and R. R.

Barnes Mfg. Co., C. T., 337 W. Monroe st., Chicago, Ill.
Belland Track Drill Co., 707 N. 2d st., St. Louis, Mo.
De Weese, F. M., Chillicothe, O.
Dwight, E. P., 407 Library st., Phila., Pa.
Illinois Iron and Bolt Co., Carpentersville, Ill.
Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**
McCoy & Sanders, 26 Warren st., N. Y.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.

Jacks—Crank Pin.

Dudgeon, Richard, 24 Columbia st., N. Y.

Jacks—Hydraulic.

Alexander, S. A., York, Pa.
Brill, J. G., Co., Philadelphia, Pa.,
Chapman, Jack, Co. (The), 11 Grand Arcade, Cleveland, O.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Currier, Cyrus & Sons, Newark, N. J.
De Weese, F. M., Chillicothe, O.
Dickson Mfg. Co., Scranton, Pa.
Dienelt & Eisenhardt, 1306 Howard st., Phila., Pa.
Dudgeon, Richard, 24 Columbia st., N. Y.
Duff Mfg. Co., Marion av. and Martin st., Allegheny, Pa.
Greeley, E. S. & Co. (The), 5 & 7 Dey st., N. Y.
Howard, Geo. C., 17 S. 18th st., Phila. Pa.; 12 Cortlandt st., N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Irving Mfg. & Tool Co., 26 Warren st., N. Y.
Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**
Justice, Philip S. & Co., 14 N. 5th st, Phila., Pa.
McCoy & Sanders, 26 Warren st., N. Y.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Railway Speed Recorder Co., Kent, O.
Rogers, H. A., 19 John st., N. Y. **iv.**
Urquhart, John S., 46 Cortlandt st., N. Y.
Watson & Stillman, 210 E. 43d st., N. Y.

Jacks—Lever and Screw.

Joyce, Cridland & Co., Wyandot st., and R. R., Dayton, O. **27.**
Railway Speed Recorder Co., Kent, O.

Jacks—Lifting.

Badger Bros., W. Quincy, Mass.
Baird Bros., Holly, Mich.
Champion Lifting Jack Co., Palmyra, N. Y.
De Weese, F. M., Chillicothe, O.
Donovan, D. & Co., Oswego, N. Y.
Hercules Lever Jack Co. (The), Irvington, N. J.
Hoagland & Anderson, Indianapolis, Ind.
Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**
McCoy & Sanders, 26 Warren st., N. Y.
McSherry, D. E. & Co., 1126-1130 E. 3d st., Dayton, O.
Railway Speed Recorder Co., Kent, O.

Jacks—Screw.

Alexander, S. A., York, Pa.
Dickson Mfg. Co., Scranton, Pa.
Forsaith, S. C. & Co., Manchester, N. H.
Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**

Jacks—Pulley and Traversing.

Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**

Jacks—Weighing.

Bagley & Sewall Co., Watertown, Conn.

Japan Manufacturers.

Bird Varnish Co., 20 E. 3d st., Cincinnati, O.

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Booden & Son, 243-251 N. 9th st., B'klyn, E. D., N. Y.
Johns, H. W., Mfg. Co., 87 Maiden la., N. Y.
Moller & Schumann, Flushing av., c. Marcy av., B'klyn. N. Y.
Murphy & Co., 227 B'way, N. Y. **84.**
Parrott Varnish Co., Bridgeport, Conn.
Platt, L. A., & Co., 21 Brown st.,, Waterbury, Conn.

Joiner for Facing Locomotive Brasses.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60,**

Jointers and Locomotive Jointers.

Baldridge, J. W., & Co., 9 Vine st., Cincinnati, Ohio.
Colladay, Jos. O., & Bro., 626 Race st., Phila., Pa.
Egan Co (The), Cincinnati, O.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Power, L., & Co., 20 S. 23d st.. Phila., Pa.
Trevor & Co., Lockport, N. Y.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.

Joints—Lock Nut and Expansion.

Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Dickson Mfg. Co., Scranton, Pa.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Sharon Boiler Works, Sharon, Pa.
Wainwright Mfg. Co. (The), 65 & 67 Oliver st., Boston, Mass.
Watkins, Thos., Johnston, Pa.

Journal Box Lids.

Hewitt Box Lid Co., 187 Dearborn st., Chicago, Ill.
Kinzeer & Jones, 37 Penn av., Pittsb'gh, Pa.
Malleable Iron Co., Dayton, O.
Ramapo Wheel & Foundry Co., Ramapo, N. Y.

Journal Box Spring Plates.

Smith & Co., H. W., 155 B'way, N. Y.

Journal Boxes.

Andrews, Frank H., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Baltimore, Md.
Barrett Mfg. Co., 8 Oliver st., Boston, Mass.
Bemis Car Box Co., Springfield, Mass.
Brill, J. G., Co., Philadelphia, Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Brooklyn Ry. Supply Co. (The), 44 Walworth st., B'klyn. N. Y.
Brown, A. & F., 43 Park pl., N. Y.
Chapin Mfg. Co., 69 Wall st., N. Y.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Columbus Iron Works Co., Columbus, Ga.
Dederick, Z. P., Sherman, Tex.
Dickson Mfg. Co., Scranton, Pa.
Dorner & Dutton, 14 Winter st., Cleveland, O.
J. B. Ehrsam Machine Co., Enterprise, Kan.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, Cleveland, O.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hewitt Box Lid Co. (The), 187 Dearborn st., Chicago, Ill.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Keystone Smelting Co. (The), (Ltd.), 33d st., Pittsburgh, Pa.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Lima Machine Works, Lima, O.
Lowell Oiler Co., Lowell, Mass.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Miller, Chas. B., 310 E. 14th st., N. Y.
Novelty Mfg. Co., Depere, Wis.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Ramapo Wheel and Foundry Co., Ramapo, N.Y.: 115 Broadway, N. Y.
Shelton Brass Hardware Co. (The), Birmingham, Conn.
Snead & Bibb, Louisville, Ky.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Street Ry. Supply Co., Cleveland, O.
Timms Car-Coupler and Journal Box Co., Columbus, O.
Tyler Bros., 8 Oliver st., Boston, Mass.
Van Duzen & Tift, 102-104 E. 2d st., Cincinnati, O. **57.**
Wharton, Wm., Jr. & Co. (Inc.), 25th st. and Washington av., Phila., Pa.
Whitney, A. & Sons, Phila., Pa.
Whiting Mfg. Co., Cedar Rapids, Ia.

Kalsomine—(Anti.)

Anti-Kalsonine Co., Grand Rapids, Mich.

Knees.

Andrews, Frank H., 545 W. 33d st., N. Y.
Way Foundry Co. (The), 23d and Wood sts., Phila., Pa.

Knives—Machine.

Branch, Crooks & Co., St. Louis, Mo.
Chattanooga Saw Works, Chattanooga, Tenn.
Coes, Loring & Co., 1 Coes sq., Worcester, Mass.
Davis, Ezekiel, West Fitchburg, Mass.
Dickson Mfg. Co., Scranton, Pa.
Dowd, John, East Lynn, Mass.
Emerson, Smith & Co. (Ltd.), Beaver Falls, Pa.
Fay, A. J. & Co., Cincinnati, O.
Hankey, A. & Co., Rochdale, Mass.
Hardy, L. & Co., Worcester, Mass.
Hiscox File Mfg. Co. and Machine Knife Works, W. Chelmsford, Mass.
Holmes, E. & B., Buffalo, N. Y.
Lanterman Bros., 179 S. Clinton st., Chicago, Ill.
Lape, J. A. & Co., 139 E. Pearl st., Cincinnati, O.
Lovejoy, Daniel & Sons, 1 Cushing st., Lowell, Mass.
McCarty, J. C. & Co., 97 Chambers st., N. Y.
McLaughlin & Lloyd, 174 Centre st., N. Y.
Moss & Graham, 508 Pearl st., N. Y.
Oldham, Joshua, White, n. Elm st., N. Y.
Ryerson, S. C., Kemble st., Boston Highlands, Mass.
Simonds, A. A., Dayton, O.
Simonds, John, 511 Mission st., San Francisco, Cal.
Simonds Mfg. Co., Fitchburg, Mass.
Tanite Co. (The), Stroudsburg, Pa.
Taylor Bros & Co., Fulton, N. Y.
Taylor, Styles & Co., Riegelsville, N. J.
White, L. & I. J., 310-314 Exchange st., Buffalo, N. Y.

Keys and Cotters.

Browning, Sisum & Co., 85 Chamber st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
E. Jenckes Mfg. Co., Pawtucket, R. I.
King, R. T. & Son, 753 S. Front st., Columbus, Ohio.
Whitman & Barnes Mfg. Co. (The), Akron, O.

*Labor Bureau.

De Intinis, L., 1113 Chouteau av., St. Louis, Mo.

*Lacquers—Smoke Stack.

Calman, Emil & Co., 299 Pearl st., N. Y.

Ladders.

Adams, F. F. Co. (The), Erie, Pa.
Allen & Co., 140 & 142 E. 41st st., N. Y.
Anthony & Masters, 235 Sherman av., Jersey City Heights, N. J.

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Bangor Extension Ladder Co., Bangor, Me.
Berg, John, & Bros., 222 22d st, Chicago, Ill.
Bishop, C. E. & Co., Hartford, Conn.
Bishop Bros., Providence, R. I.
Bishop & Bros., Somerville, Mass.
Burch, S. A., 518 17th st., Detroit, Mich.
Case, Wheeler, Portland, N. Y.
Chesbro & Whitman, 2d av., c. E. 64th st, N. Y.
Chicago Step Ladder Co., 69 S. Clinton st., Chicago, Ill.
Combination Ladder Co., Providence, R. I.
Davenport Ladder Co., Davenport, Iowa.
Deyo, J. M., Rochester, N. Y.
Eagle Iron Works, Wilkesbarre, Pa.
Emery-Gates Sectional Ladder & Mfg. Co., of N. Y., 39 Dey st., N. Y.
Emory, R. H., Morrisonville, N. J.
Gates, P., Tenny & Son, 39 Dey st., N. Y.
Gledhill & Co., 4-8 Union st, Bridgeport, Conn.
Henabery, Thomas J., 1319-1321 State st., Chicago, Ill.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Loomis, A. J., Coldwater, Mich.
Mace, L. H., & Co., 111 E. Houston st., N. Y.
Metz, Ernest, 335 E. 27th st., N. Y.
Miller, Anthony, 152 E. 23d st., N. Y.
Mitchell, John, & Son, Eagle Village, N. Y.
Moulton, C. W. H., & Co., East Cambridge, Mass.
Nichols, C. C., & Co., St. Louis, Mo.
Phelps, H. E., Marshall, Mich.
Pump, I. X. L. Co. (The), Goshen, Ind.
Seagrave Ladder Co., Bay City, Mich.
Smith, John B., Conway, N. H.
Smith, Joseph, 647 W. 50th st., N. Y.
Story, Chas. O., Gardner, Mass.
Toppin, H., Marion, N. J.
Van Horn, Edw., 355 George st., New Haven, Conn.
Wallace, Franklin, West Cheshire, Conn.
Walker, A. M., Minneapolis, Minn.
Welz, Jacob, 174 Woodward av., Detroit, Mich.

Lagging—Asbestos Locomotive.

Asbestos Packing Co. (The), 169 Congress st., Boston, Mass.
John's, H. W. Mfg. Co., 87 Maiden la., N. Y.

Lampblack.

Bihn & Co., Bridesburg st., Phila., Pa.
Binney & Smith, 17 Platt st., N. Y.
Carmahan, J. L., Duke Centre, Pa.
Davey & Co., Pacific Junction, Ill.
Dysart, John T., Shippensville, Pa.
Eddy, G. W. & Wm. M., Waterford, N. Y.
Fisher & Swan, Eldred, Pa.
Hill, Joseph G., Harrison, N. J.
Hodge, D. W., 276 Main st., Buffalo, N. Y.
Lynn Lampblack Co., Lynn, Mass.
Martin, L. & Co., 226 Walnut st., Phila., Pa.
Murdock, E. H. & Co. (The), 6 Pub. Landing, Cincinnati, O.
Neff, Peter, Gambier, O.
Nolen & Boardman, 5 Beekman st., N. Y.
Rogers & Co., 299 Pearl st., N. Y.
Sears, Levi, East Dennis, Mass.

Lamps—Car (Gas).

Standard Gas Lamp Co., 411 Cherry st., Phila., Pa.

Lamps—Ship.

Aikman, S. M. & Co., 261 Pearl st., N. Y.
Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.
Hicks & Smith, 42 South 5th av., N. Y.
Howard & Morse, 45 Fulton st., N. Y.

Lamps—Mine.

Highberger, D. P., Irwin, Pa.
Hunt & Connell, Scranton, Pa.
Leonard Bros., Scranton, Pa.
Shepard, Sidney & Co., 145-147 Seneca st., Buffalo, N. Y.
Wardin, R. B. & Co., 235 Market st., Phila., Pa.

Lamps—Station.

Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

Lamps—Street Car.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 Broadway, St. Louis, Mo.
Clark, Geo. M. & Co., 157 Superior st., Chicago, Ill.
Clute, Geo. M., West Troy, N. Y.
Dederick, Z. P., Sherman, Tex.
Dayton Mfg. Co. (The), Dayton, O.
Foote, Orlo A., Cleveland, O.
Greeley, E. S. & Co. (The), 5 Dey st., N. Y.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Miller, Chas. B., 310 E. 14th st., N. Y.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Smith, Josephine D., 352 Pearl st., N. Y.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.

Lamps—Switch and Signal.

Adams & Westlake Mfg. Co. (The), 110 Ontario st, Chicago, Ill.; 78 Washington st., Boston, Mass.
Clark, Geo. M. & Co., 157 Superior st., Chicago, Ill.
Cross, J. E., 115 B'way, N. Y.
Dayton Mfg. Co. (The), Dayton, O.
Dressel, Geo. C. & Co., 715 E. 173d st., N. Y.; 37 Park pl., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
R. R. Signal Lamp and Lantern Co. (The), 100 Beekman st., N. Y.

Lamps—Torch.

Henderson, W. G. & Co., Pittsburgh, Pa.

Lamps and Lanterns.

Adams & Westlake Mfg. Co. (The), 110 Ontario st., Chicago, Ill.; 78 Washington st., Boston, Mass.
Adney, J. D., 163 W. Van Buren st., Chicago, Ill.
Aikman, S. M. & Co., 261 Pearl st., N. Y.
Alba Light Co. (The), 182 Main st., Cincinnati, O.
Allen, R. J. Son & Co., 311 Market st., Phila., Pa.
Allyne & White, 112 Front st., San Francisco, Cal.
Almy, H. S. & Co., 37 Barclay st., N. Y.
Alta Mfg. Co., 175 Washington st., Boston, Mass.
Altemers, S. T., Jr., 58 S. 2d st., Phila., Pa.
Am. Reflector Co., 5th, c. Cherry st., Phila., Pa.
Ansonia Brass and Copper Co., 19-21 Cliff st., N. Y.
Armour & Osterhoudt, 100 Beekman st., N. Y.
Armstrong, J. T. & Co., 627 Kearney st., San Francisco, Cal.
Atkins, D. F. & Co., Norwalk, Conn.
Atwood, P. C., 35 N. 9th st., Phila., Pa.
Baker, Jas. R. & Son., Kendallville, Ind.
Bangaret, P. & Son., 1241 Chace st., Balto., Md.
Baptist, W. V., 79 Marcy av., B'klyn, N. Y.
Barger & Miller, Dayton, O.
Bartlett Street Lamp Co., 35 Howard st., N. Y.
Barre, J. & Co., 71 Fulton st., N. Y.
Barrett, J. W., 76 Cross st., Boston, Mass.
Bartlett Street Lamp Mfg. Co., 42 College pl., N. Y.
Behrens, H., 24 Graham av., B'klyn, N. Y.
Bell Bros., Columbus, O.
Bellaire Stamping Co., Bellaire, O.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Berendsohn, S., 86 Fulton st., N. Y.
Berger, F. J. & Son, 526 Vine st, Cincinnati, O.
Berry, W. B. & Co., 79 North st., Boston, Mass.
Bianchi, L., 300 Montgomery av., San Francisco, Cal.
Binney, J. & Son, 342 Atlantic av., Boston, Mass.

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Black, G. A., Dayton, O.
Black & Co., 61 E. 5th st., Cincinnati, O.
Blackie, W. H., 706 Washington st., St. Louis, Mo.
Blackman, E., 93 Maiden la., N. Y.
Blodgett, W. A., 615 Atlantic av., Boston, Mass.
Bobb, G., 1135 N. B'way, St. Louis, Mo.
Boesch, E., 583 Mission st., San Francisco, Cal.
Boston Lamp Co., 376 Washington st., Boston, Mass.; 712 B'way, N. Y.
Boyd, M. A., 724 New Market st., Phila., Pa.
Bradley & Hubbard Mfg. Co., 21 Barclay st., N. Y.; Meriden, Conn.
Brahams, J. B. & E. B., 214 B'way, B'klyn, N. Y.
Brainerd & Co., 11 S. B'way, St. Louis, Mo.
Brann, David J., 70 W. Monroe st., Chicago, Ill.
Breach Loading Lantern Co., 309 9th st., Washington, D. C.
Bridgeport Brass Co., 19 Murray st., N. Y.; Bridgeport, Conn.
Brigham & Card, 12 Chapin Blk., Buffalo, N. Y.
Bristol Brass and Clock Co., Bristol, Conn.; 32 Warren st., N. Y.
Brockmann, C. E., 110 Main st., Cincinnati, O.
Brown, J. T., 934 N. 2d st., Phila., Pa.
Buckeye Lantern Co., Bellaire, O.
Burton, Patterson & Co., St. Paul, Minn.
Cahill, A., 219 Johnson st., B'klyn N. Y.
Carey & Co., 243 Arch st., Phila., Pa.
Cass Lamp Works, 179 W. Lake st., Chicago, Ill.
Cassidy & Son, 127 Mercer st., N. Y.
Challinor, Taylor & Co., Pittsburgh, Pa.
Chandlee, Quarles & Co., Lombard, c. Hanover st., Balt., Md.
Charles, C. C., 49 Dearborn st., Chicago, Ill.
Charles, Parker Co. (The), Meriden, Conn.
Chester, R., 248 S. Water st., Chicago, Ill.
Chicago Lamp Co., 238 Lake st., Chicago, Ill.
Ciootf, F. X., 217 Front st., San Francisco, Cal.
Cincinnati Railway Supply Co., 53 W. 2d st., Cincinnati, O.
Clair Mfg. Co., 178 Washington st., Chicago, Ill.
Clark, G. M. & Co., 157 Superior st., Chicago, Ill.
Clarke, S., 37½ Ward st., Newark, N. J.
Claussen, F., 513 Vine st., Cincinnati, O.
Cleveland Non-Explosive Lamp Co., Main, c. Centre st., Cleveland, O.
Clipper Mfg. Co. (The), 543 W. 6th st., Cincinnati, Ohio.
Collins, E., 428 Hicks st., B'klyn, N. Y.
Columbus Gas Fitting Co., Columbus, O.
Combs, A. & Son, 160 N. 9th st., Phila., Pa.
Conrad, E., 1135 N. 3d st., Phila., Pa.
Cornell, J. B. & J. M., 141 Centre st., N. Y.
Covell, C. H., 1150 B'way, N. Y.
Cox, Parish & Unger, 53 Warren st., N. Y.
Craighead, F., 615 Smithfield st., Pittsburgh, Pa.
Craighead & Knitz Mfg. Co., 52 Pearl st., Boston, Mass.; 38 Park pl., N. Y.
Cramer, J., Baltic av., c. Miller st., B'klyn, N. Y.
Crandall, H. L. & Co., Ashaway, R. I.
Crass, J. E., 415 B'way, N. Y.
Crawford, C. C., 719 Morgan st., St. Louis, Mo.
Curran, T., 351 N. 2d st., B'klyn, N. Y.
Dance, H. A., 1803 Polk st., San Francisco, Cal.
Daniel & Stewart, 819 Filbert st., Phila., Pa.
Dannenhold, B. & Co., 99 W. 5th st., Cincinnati, Ohio.
Dardonville, J., 200 W. 4th st., Cincinnati, O.; 227 5th av., N. Y.
Davenport, W., 624 B'way, Albany, N. Y.
Davis, I., Dayton, O.
Day, T. & Co., 122 Sutter st., San Francisco, Cal.
Dayton Mfg. Co. (The), Dayton, O.
Dean, G. H., Shipley & Co., Pearl, c. Walnut st., Cincinnati, O.
Deemer, J. A., 1718 Passyunk av., Phila., Pa.
Dewey, F. O. & Sons, 28 Canal st., Boston, Mass.
Dewey & Johnson, 872 B'way, N. Y.
Dietz, A. C., & Co., 7 Front st., San Francisco, Cal.
Dietz, R. E. Co. (The), Greenwich, c. Laight st., N. Y.
Doane & Wellington Mfg. Co., 468 Cherry st., N. Y.
Dolfinger, J., & Co., 316 W. Market st., Louisville, Ky.
Dougherty, A., 575 S. 20th st., Phila., Pa.
Donnell, J. F., & Co., 822 B'way, c. 12th st., N. Y.
Drake, J. W., 910 Girard av., Phila., Pa.
Dressel Railway Lamp Works, 717 E. 173d st., N. Y.; 37 Park pl., N. Y.
Drexler, J., Rampart, c. Perdido st., New Orleans, La.
Dunn, H. D., 547 Wash'n st., San Francisco, Cal.
Dustin, N., & Co., Dexter, Me.
Ebert, A., 543 Main st., Cincinnati, O.
Eicholz & Macpherson, 27 6th st., San Francisco, Cal.
Engel & Doering, 145 Elizabeth st., N. Y.
Enoch Bros., 4 Murray st., N. Y.
Ensign, Susan, 149 Division st., B'klyn, N. Y.
Erb, J., 2153 N. 6th st., Phila., Pa.
Ewing & Bill Lantern Co., 1729 Chapline st., Wheeling, W. Va.
Excelsior Flint Glass Co., Pittsburgh, Pa.
Felthousen & Russell, 139 Main st., Buffalo, N. Y.
Ferris, J. H., 44 Park pl., N. Y.
Fisher, C. B., Springfield, O.
Fletcher, A. S., 4022 Filbert st., Phila., Pa.
Follett Lantern Mfg. Co., Rochester, N. Y.
Fonderschen, P., 72 Scholes st., B'klyn, N. Y.
Forest City Brass Works, 44 Leonard st., Cleveland, O.
Forrest & Co., 377 Fulton st., B'klyn, N. Y.
Frear, W. H., 1 Cannon pl., Troy, N. Y.
French, S. A., 400 Broome st., N. Y. 65.
Frentzel, J. F., 41 N. 9th st., Phila., Pa.
Frith, T. B., 214 Grand st., B'klyn, N. Y.
Gallinger & Co., 36 Barclay st., N. Y.; 140 1st st., Pittsb'gh, Pa.
Gardner, L. J., Newark, N. J.
Gas Lamp Works, 179 Lake st., Chicago, Ill.
Germann, A. E., 101 W. 6th st., Cincinnati, O.
Gibbs, F. W., 80 B'way, B'klyn, N. Y.
Gill Bros. & Co., Steubenville, O.
Gillinder & Sons, Oxford & Howard sts., Phila., Pa.
Glaescher, G. W., 5 W. 5th st., Cincinnati, O.
Glaessgen, J., 107 Ewen st., B'klyn, N. Y.
Gleason, E. P. Mfg. Co., 181-183 Mercer st., N. Y.
Globe Gas Light Co., 77-79 Union st., Boston, Mass.
Goerke, O., 53 Murray st., N. Y.
Goetz, B., Mfg. Co., 172-174 Mercer st., N. Y.
Goetz, N., 38 Montrose av., B'klyn, N. Y.
Goodale & Styles, 17 W. Main st., Rochester, N. Y.
Graf, A., 44 2d st., San Francisco, Cal.
Gray, P., 12 Marshall st., Boston, Mass.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Greene, E. F., Springfield, O.
Grier & Jack, 18 Lake st., Chicago, Ill.
Griffith, L. B., 956 N. 11th st., Phila., Pa.
Hahn & Brunett, 262 Greenwich st., N. Y.
Hall, E. M., 406 Race st., Phila., Pa.
Hall, S. S., 138 Stanhope st., B'klyn, N. Y.
Hall, Aikman & Co., 44 Park pl., N. Y.
Hall & Taylor, 2028 Ridge av., Phila., Pa.
Ham, C. T., Mfg. Co., 115 Lake st., Chicago, Ill.; 11 Allen st., Rochester, N. Y.
Harper Bros., 54 Rutgers st., N. Y.
Hart & Duff Hat Co., 113 N. B'way, St. Louis, Mo.
Hartman, K., 24 Bank st., Cleveland, O.
Hektograph Mfg. Co., 66 Devonshire st., Boston, Mass.
Helvig, Hans, A. J., 140 Broad st., N. Y.
Henkle, L., 103 William st., Rochester, N. Y.
Henrichs, C. F. A., 29-33 Park pl., N. Y.
Hicks & Smith, 42 S. 5th av., N. Y.
Hitchcock Lamp Co., Watertown, N. Y.
Hobart, Craig & Co., Southington, Conn.
Hoeilge, F., Jr., Gest st., 21st Ward, Cincinnati, Ohio.
Hohenstein, H., 78-80 Murray st., N. Y.
Hollander, Bradshaw & Folsom, 615 Washington st., Boston, Mass.
Hollings, R. & Co., 547 Washington st., Boston, Mass.
Holmes, Booth & Hayden, 25 Park pl., N. Y.; Waterbury, Conn.
Holmes, T. M., 309 Race st., Phila., Pa.
Holzer, C. F., 1835 Ridge av., Phila., Pa.
Hood, H. & Co., 38 Park pl., N. Y.

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Horn, Brannen & Forsyth Mfg. Co. (The), 1218 S. 8th st., Phila., Pa.
Horn, H. B., 411 Keep st., B'klyn, N. Y.
Howard & Morse, 45 Fulton st., N. Y.
Huckel, H. C., 134 N. 9th st., Phila., Pa.
Humbert, C. H., 4th av., c. Market st., Pittsb'gh, Pa.
Hunt, H. B., 57 Prospect st., Cleveland, O.
Hunt & Connell (Ltd.), Scranton, Pa.
Huntington, H., 4th, c. Sycamore st., Cincinnati, Ohio.
Hyde, G. H., 692 B'way, N. Y.
Illinois Street Gas Co., 195-197 Michigan st., Chicago, Ill.
Independent Glass Co., Pittsburgh, Pa.
Insurance Oil Tank Co., 95 Gravier st., Louisville, Ky.
Irving, J., 108 S. Halstead st., Chicago, Ill.
Jacobsen, C. F., 18 W. 23d st., N. Y.
Joguel, J. J., Fort Wayne, Ind.
Jonte, A. & Sons, 114 W. Court st., Cincinnati, O.
Kelly Lamp Co., 208 Mill st., Rochester, N. Y.
Kinney & Levan, 120 Superior st., Cleveland, O.
Kirkhope, G., 8 Dayton st., Cleveland, O.
Kirmse, H. W., 134 Reade st., N. Y.
Knapp Mfg. Co. (The), 22-24 Frankfort st., N. Y.
Koehler, J., 335 Leonard st., B'klyn, N. Y.
Kolbe, W., 523 Main st., Cincinnati, O.
Kramer, John H., 145 Elizabeth st., N. Y.
Kraushaar Lamp and Reflector Co., 209 S. Broadway, St. Louis, Mo.
Kruse & Baron, 207-209 Centre st., N. Y.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Laney, S. H., Market, c. William st., Elmira, N. Y.
Lawrence, J. M., 192 Water st., N. Y.
Lawton & Co., 434 4th st., Louisville, Ky.
Leonard Bros., Scranton, Pa.
Linton, Robert 28 South st., N. Y.
Litchfield, S. 878 Sheriff st., Cleveland, O.
Loomis & Kent, Canton, O.
Lovell, F. H. & Co., 118 John st., N. Y.
Lowden, D. R., 236 W. Girard av., Phila., Pa.
Lynn, W. & Co., 143 W. 6th st., Cincinnati, O.
McCartney, J., 3604 Lancaster av., Phila., Pa.
McFadden, H. G. & Co., 38 Warren st., N. Y.
McHenry & Co., 8 E. 4th st., Cincinnati, O.
McKinney, C. H. & Co., 634 Washington st., Boston, Mass.
McLewee & Knapp Mfg. Co., 28 Barclay st., N. Y.
Maher, J. 61 37th st., B'klyn, N. Y.
Manhattan Brass Co., 475 1st av., N. Y.
Marsh, H. F., 577 Market st., San Francisco, Cal.
Martell, J., 623 Sacramento st., San Francisco, Cal.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Mason, G. H. & Co., 152 Blackstone st., Boston, Mass.
Matthews & Willard Co. (The), 70 N. Elm st., Waterbury, Conn.
May, S. E., 155 Fulton st., N. Y.
Maybaum & Koopman, 723 Chestnut st., Phila., Pa.
Mead, W. S., 1123 Chestnut st., Phila., Pa.
Meis, C., 458 Broadway, B'klyn, N. Y.
Mergott, J. E., 10-12 Ward st., Newark, N. J.
Meriden Malleable Iron Co., 42 Park pl., N. Y.; 186 Franklin st., Boston, Mass.; Meriden, Conn.
Meyer, Curt W., 357 4th av., N. Y.
Meyrose, F. & Co., 733 S. 4th st., St. Louis, Mo.
Miles, S. A., 3612 Lancaster av., Phila., Pa.
Miller, E. & Co., 38 Pearl st., Boston, Mass.; Meriden, Conn.; 10-12 College pl., N. Y.
Mills, A., 25 Union st., Boston, Mass.
Miner, J. G., 823 Eagle av., N. Y.
Mitchell, I. D., Dayton, O.
Mitchell-Vance Co. (The) Ltd.), 836 Broadway, N. Y.
Moebringer, M., 68 Johnson av., Brooklyn, N. Y.
Moeller & Mangar, 14 Liberty st., Newark, N. J.
Mohlenhoff, F., 346 Main st., Cincinnati, O.
Monahan, T. J., Springfield, O.
Moore, M. E., 21 John st., N. Y.
Morey, Churchill & Morey, 62 Canal st., Boston, Mass.
Morrison & Rich, 61 Bromfield st., Boston, Mass.
Morrow, S. & Co., Market st., c. 1st av., Pittsburgh, Pa.
Mt. Vernon Lantern Works (The), Columbus, O.
Murphy, W. T., 96 John st., N. Y.
Myers, J. F. & Co., 869 Market st., San Francisco, Cal,
Nail City Lantern Co. (The), Wheeling, W. Va.
Nathan, B. & Co., 130 Sutter st., San Francisco, Cal.
Naumann, R., 63 Prince st., N. Y.
Neuman, Joseph, Co. (The), 11th, c Race st., Phila., Pa.
New York Brass Co., 193 Kent av., Brooklyn, N. Y.
New York Kerosene Gas Light Co., 261 Pearl st., N. Y.
New York Lamp Co., 25 Murray st., N. Y.
N. J. Lamp and Bronze Works, New Brunswick, N. J.
Niemeier & Kistenmacher, 906 N. Broadway, St. Louis, Mo.
Nichols, J. J., 26 Barclay st., N. Y.
Nicholson, Frost & Co., 13 S. Market st., Boston, Mass.
O'Brien, C. H., 450 Atlantic av., B'klyn, N. Y.
Ohio Lantern Co., Bellaire, O.
Osborne & Cheesman Co., Ansonia, Conn.
Overacre, P. I., 123 California st., San Francisco, Cal.
Palmer & Randall, 1307 Race st., Phila., Pa.
Patterson, H., 34 Greene st., Albany, N. Y.
Peabody, Henry W. & Co., 79 Kilby st., Boston, Mass.
Peaslee, Gaulbert & Co., 415 W. Main st., Louisville, Ky.
Perfection Mfg. Co., 6th & Arch sts., Phila., Pa.
Peters, C. H., 144 W. 6th st., Cincinnati, O.
Pettibone, Mulliken & Co., 188 Washington st., Chicago, Ill.
Pflum, J, Dayton, O.
Phillips, L. A., 352 Freeman av., Cincinnati, O.
Phœnix Glass Co., Pittsburgh, Pa.
Phœnix Mfg. Co., Newark, N. J.
Pisch, Francis L., 229 6th st., N. Y.
Pittsburgh Brass Co. (Ltd.), Sandusky & Isabella sts., Allegheny, Pa.; 44 Park pl., N. Y.
Plume & Atwood Mfg. Co., 71 Pearl st., Boston, Mass.; 115 Lake st., Chicago, Ill.; 18 Murray st., N. Y.
Porter, William Sons, 271 Pearl st., N. Y.
Post & Co., 161 W. Pearl st., Cincinnati, O.
Prier, A. & Co., 909 Santa Fé st., Kansas City, Mo.
Pye, W. C., 201 Fulton st., B'klyn, N. Y.
Quarre, V. Co., 1413 Chestnut st., Phila., Pa.
Railroad Signal Lamp & Lantern Co., 100 Beekman st., N. Y.
Ray, W. S. & Co., 12 Market st., San Francisco, Cal.
Reid, C. A., 61 B'way, Cincinnati, O.
Richmond, C. C. & Co., 8 Central Wharf, Boston, Mass.
Rinear, E. H., 1444 N. 10th st., Phila., Pa.
Rochester Kerosene Burner Co., 409 E. Main st., Rochester, N. Y.
Rochester Lamp Co., 25 Warren st., N. Y.
Rockwell, S. E., 919 Ridge av., Phila., Pa.
Rogers, C. J., Norwich, Conn.
Rogers, G. R., 72 Cortlandt st., N. Y.
Romer & Co., 277 Passaic st., Newark, N. J.
Rorke, Edward & Co., 40 Barclay st., N. Y.
Roy & Garrett, 1237 Vine st., Phila., Pa.
Rudolph, W. & Co., 1567 Market st., San Francisco, Cal.
Russell, Henry & Nathan, 42 Barclay st., N. Y.
St. Louis Electric Lamp & Stove Co., 808 Pine st., St. Louis, Mo.
Salisbury, C. A. & Co., Dayton, O.
Sauberlich, E., 332 N. 4th st., Phila., Pa.
Saunders, C. E., 146 Seneca st., Buffalo, N. Y.
Schaefer, A. J., 1508 S. 8th st., Phila., Pa.
Schaefer, H., 716 W. Baltimore st., Balt., Md.
Schaffer, F., 147 Harrison av., B'klyn, N. Y.
Schick, Mary, 18 Stagg st., B'klyn, N. Y.
Schneider, B. B., 37 Park pl., N. Y.
Schrader & Zelsman, Columbus, O.
Scoville Mfg. Co., 423 Broome st., N. Y.; Waterbury, Conn.

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Sefrin, A., 111 Graham av., B'klyn, N. Y.
Shaler, J. C., Jr., 438 Smithfield st., Pittsburgh, Pa.
Sharp, R., 3½ Union st., W. Troy, N. Y.
Shaw, L. A., 606 Poplar st., Phila., Pa.
Shepard, Sidney, & Co., 147 Seneca st., Buffalo, N. Y.
Sheridan, W. R., & Co., 41 Sudbury st., Boston, Mass.
Shulhafer, S., 510 5th st., Louisville, Ky.
Siemens-Lungren Gas Lamp Co., 785 B'way, N. Y.; 218 Wash'n st., Phila., Pa.
Smith, F., 193 Hoyt st., B'klyn, N. Y.
Smith, F. P., & Co., Indianapolis, Ind.
Smith, Josephine D., 852 Pearl st., N. Y.
Smith, J. P., Son & Co., 617 Lib. av., Pittsb'gh, Pa.
Smith, Wm. C., 471 Grand st., B'klyn, N. Y.
Smith & Byrd, Springfield, O.
Spilcker, W. & H., 214 E. Baltimore st., Balt., Md.
Stainsby, W., 881 Broad st., Newark, N. Y.
Standard Gas Lamp Co., 411 Cherry st., Phila., Pa.
Standard Lighting Co., 151 & 153 Seneca st., Cleveland, O.
Steam Gauge & Lighting Co., 2 Centre st., Rochester, N. Y.
Steam Gauge & Lantern Co., 23 Murray st., N. Y.; 25 Lake st., Chicago, Ill.
Stoll, A., 614 Girard av., Phila., Pa.
Stone, W. A., 133 Pearl st., Boston, Mass.
Story, J., Freeman av., c. 7th st., Cincinnati, Ohio.
Strait, Marcus D., Newstead av., n. Ashland av., St. Louis, Mo.
Straus, Bloom & Co., 100 Battery st., San Francisco, Cal.
Strauss, L., & Sons, 42 to 48 Warren st., N. Y.
Sultan, C., 79 Boerum st., B'klyn, N. Y.
Swain, R. A., & Co., 112 California st., San Francisco, Cal.
Swann & Whitehead, 2 College pl., N. Y.
Tallmadge, C. S., 277 Vine st., Cincinnati, O.
Tompkins, W., & Son, 328 Grand st., B'klyn, N. Y.
Taylor & Hooe, 71 Vine st., Cincinnati, O.
Ternan, P., 220 Atlantic av., B'klyn, N. Y.
Thomas, J. M., 609 N. 7th st., St. Louis, Mo.
Thwaites, George, & Co., 32 Old sl., N. Y.
Tieman, J. H., 88 Fulton st, B'klyn, N. Y.
Tirrell, O., 39 Dey st., N. Y.
Tufts, Nathaniel, 153 Franklin, st. Boston, Mass.
Trimble Bros., Salem, O.
Union Glass Co., 129 Milk st., Boston, Mass.
Upton, C. S., 1201 B'way, N. Y.
Vanderschuyt, H., 161 Throop av., Brooklyn, N. Y.
Wallace, R. P., & Co., 211 Wood st., Pittsb'gh, Pa.
Wallace & Sons, 89 Chambers st., N. Y.
Warner & Co., 409 Cherry st., Phila., Pa.
Washburn & Co., 78 Cortlandt st., N. Y.
Wasserman Regenerative Gas Lamp Co., 1005 Arch st., Phila., Pa.
Watt, G. S., 464 Carroll st., B'klyn, N. Y.
Weidener, A. J., 36 S. 2d st., Phila., Pa.
Weidner & Co., 106 Camp st., Louisville, Ky.
Weiss, W. C., 74 W. Court st., Cincinnati, O.
Wellington Scientific Vacuum Lamp Co., 468 Cherry st., N. Y.
Wensthoff & Co., Dayton, O.
Westland Safety Lamp Co., 2 Market sq., Providence, R. I.
Westwater, J. M. & W., Columbus, O.
Whelan, Wm., 236 Nassau st., B'klyn, N. Y.
Whitehead, W. M., 130 S. 2d st., Phila., Pa.
Whitfield, C. L., 318 W. Girard av., Phila., Pa.
Wilcox, A. M., 42 Murray st., N. Y.
Wilhelm & Co., 919 Race st., Phila., Pa.
Williams, I. A. & Co., Utica, N. Y.
Williamson & Burke Mfg. Co., 52 Park pl., N. Y.
Wilson, L. L., Centre Point, Ia.
Wunderlich, H., 134 Reade st., N. Y.
Yates & Co., 113 Front st., San Francisco, Cal.
Zellar, A., Dayton, O.

***Land Agent.**

Snover, Geo. W., 103 Griswold st., Detroit, Mich. **86.**

Lathes.

Atchison & Little, 20 W. Center st., Cleveland, Ohio.
Ames Mfg. Co., Chicopee, Mass; 33 Pemberton sq., Boston, Mass. **61.**
Antigo Planing Mill Co., Antigo, Wis.
Andrews, P. G., Belmont, N. Y.
Barnes, W. F. & John, Co., 611 Ruby st., Rockford, Ill. **49.**
Battle Creek Machinery Co., Battle Creek, Mich. **17.**
Beggs, James & Co., 9 Dey st., N. Y.
Betts Machine Co., Wilmington, Del.
Cannon, F.-C., New Haven, Conn.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
Cooke & Co., 22 Cortlandt st., N. Y.
Derby Building & Lumber Co., Derby, Conn.
Diamond Emery Wheel and Machine Co., Providence, R. I.
Dodds, Alex., 32 Mill st., Grand Rapids, Mich.
Donegan & Swift, 174 Fulton st., N. Y.
Dustin Mfg. Co., Dexter, Me.
Fairbanks, Geo. L., Worcester, Mass.
Farrel Foundry and Machine Co., Ansonia, Conn.
Fay & Scott, Dexter, Me.
Fitchburg Machine Works, Fitchburg, Mass.
Frassee & Co., 92 Park Row, N. Y.
Fuller, J. A. & Co., Worcester, Mass.
Gay, Geo., Waterford, N. Y.
Gillingham, Garrison & Co., 943 Richmond st., Phila., Pa.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Herrick, W., Northampton, Mass.
Hill, Clarke & Co., 156 Oliver st., Boston, Mass.
Hodgkins, C. & Sons, Marlboro, N. H.
Hoover, Hughes & Co., Philipsburgh, Pa.
Howard, Henry & Co., Port Huron, Mich.
Hyde, E. B., West Spring Creek, Pa.
Hyde, M., Lee, N. Y.
Island Mill Co., Burlington, Ia.
Johnson & Lund, 620 Race st., Phila., Pa.
Jones & Lamson Machine Co., Windsor, Vt.
Kerr Bros. & Co., Hicksville, O.
Kerrick, J. H., 2d av., N. and 5th st., Minneapolis, Minn.
Lamb, C. & Sons, Clinton, Ia.
Leighton, J. M. & A. W. Leighton, Perry, Me.
Little, Chas. E., 59 Fulton st., N. Y.
McDonald Lumber Co., Wausau, Wis.
Mable, W. H., Tidioute, Pa.
Merritt, J. E. Machinery Co., 56 Market st., Lockport, N. Y.
Millers Falls Co., 93 Reade st., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Moorehouse, Chas. E., Gouverneur, N. Y.
Muller Machine Tool Co., 8th and Evans sts., Cincinnati, O.
New Haven Mfg. Co., New Haven, Conn.
Nicholson & Waterman, Providence, R. I.
Niles Tool Works, Hamilton, O.
Pearson, J. H. & Co., Laurel and 39th sts., Chicago, Ill.
Plumb, Fayette R., Phila., Pa.
Port Byron Lumber Co., Port Byron, Ill.
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.
Purdy Machine Co., 65 Centre st., Cleveland, O.
Reed, F. E., 120-124 Gold st., Worcester, Mass.
Reed, J. B., Cairo, Ill.
Rhodes, H. B., Drake's Mills, Pa.
Riverside Machine Co., 45 Point st., Providence, R. I.
Rosbach, Fred. P., 224 E. Washington st., Chicago, Ill.
Sandusky Machine and Ag'l Works, Sandusky, Ohio.
Sanford, R. J., Worcester, Mass.
Scaife Foundry and Machine Co. (Ltd.), 28th, c. Smallman st., Pittsburgh, Pa.
Sebastian, May & Co., 199 W. 3d st., Cincinnati, Ohio.

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Seneca Falls Mfg. Co., 285 Water st., Seneca Falls, N. Y.
Shepard, H. L., 134 E. 2d st., Cincinnati, O.
Sheriff & Ashworth Machine Co, 80 Water st., Pittsburgh, Pa.
Smith, S. E. & Bro., 227 W. 5th st., St. Paul, Minn.
Spencer, John E., Railroad av., c. Broad st., Bridgeport, Conn.
Stark, John, Waltham, Mass.
Stewart & Kirk, Gravel Point, Ind.
Stiles & Parker Press Co. (The), Middletown, Conn.
Stone, J. F. & Co., 370 Atlantic av., Boston, Mass.
Thompson, Frank, 178 Centre st., N. Y.
Thorn, Fred S., Brownfield, Me.
Trevor & Co., Lockport, N. Y.
Tupper, A. P., Middleburg, Vt.
Watrous Bros., Bay City, Mich.
Warney & Swasey, Cleveland, O.
Waymoth, A. D. & Co., Fitchburg, Mass.
White, John A., Concord, N. H.
Winooski Lumber Co., Winooski, Vt.
Wood, L. B. & Co., Grand Valley, Pa.
Wolverton & Tinsman, Williamsport, Pa.
York, S. M., 44 S. Water st., Cleveland, O.

Lathes—Axle.

Betts Machine Co., Wilmington, Del.
Capital City Tool Co., 105 Court av., Des Moines, Ia.
Fitchburg Machine Works, Fitchburg, Mass.

Lathes—Engine.

Am. Tool and Machine Co. (The), 84 Kingston st., Boston, Mass.
Betts Machine Co., Wilmington, Del.
Brown & Sharpe, Providence, R. I.
Frasse, Peter A. & Co., 95 Fulton st., N. Y.
Fulier, J. A. & Co., 3 Cypress st., Worcester, Mass.
Gage Machine Works, Waterford, N. Y.
Garvin, E. E. & Co., 139 Centre st., N. Y.
Gould, E., & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Herrick, W., Northampton, Mass.
Manning, Maxwell & Moore, 113 Liberty st., N. Y.
New Haven Mfg. Co., New Haven, Conn.
Niles Tool Works, Hamilton, O.
Nutter, Barnes & Co., 364 Atlantic av., Boston, Mass.
Porter, J. E., Hatfield, Mass.
Reed, F. E. Worcester, Mass.
Star Tool Co. (The), Beverly, c. Mason st., Providence, R. I.
Waterhouse Electric & Mfg. Co. (The), Hartford, Conn.

Lathes—Gauge.

Buss Machine Works, Grand Rapids, Mich. **58.**
Egan Co. (The), Cincinnati, O.
Fay & Scott, Dexter, Me.
Lawrence & Chapin, Kalamazoo, Mich.

Lathes—Metal Turning.

Andres, H., 22 N. 4th st., Phila., Pa.
Barnes, W. F. & John, Rockford, Ill. **49.**
Fisher, Wm., 23d and Smaliman sts., Pittsburgh, Pa.
Frech, Wm., 68 W. Monroe st., Chicago, Ill.
Garvin, E. E. & Co., 139 Centre st., N. Y.
Kerrich, J. H., 2d av. N., and 5th st., Minneapolis, Minn.
Little, Chas. E., 59 Fulton st., N. Y.
Lodge, Davis & Co., Cincinnati, O.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Muller Machine Tool Co., 8th and Evans sts., Cincinnati, O.
Parke & Lacy, 8 California st., San Francisco, Cal.
Perkins, Cyrus, Lowell, Mass.
Pratt & Whitney Co., Hartford, Conn.
Sebastian, May & Co., 177 W. 2d st., Cincinnati, Ohio.
Whiton Machine Co., 59 Howard st., New London, Conn.

Lathes—Screw Cutting.

Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa.; 120 B'way, N. Y.
Waterbury Farrell Foundry and Machine Co., Waterbury, Conn.

Laundry—R. R. & S. S. (Specialty).

Skinner & Godfrey, 306 Main st., Buffalo, N. Y.

Lead—Pipe and Sheet.

Atwood Lead Co., Portland, Me.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Behr & Stiner, 12 Cliff st., N. Y.
Blatchford & Co., E. W., 70 N. Clinton st., Chicago, Ill.
Boston Lead Mfg. Co., 162 Congress st., Boston, Mass.
Brooklyn Smelting and Refining Works, Driggs st., bet. Union av. & Lorimer st., Brooklyn, N. Y.
Chadwick Lead Works, 173 High st., Boston, Mass.
Cincinnati Lead Pipe and Sheet Lead Works, 21 E. 9th st., Cincinnati, O.
Clark, G. W., 22 Burling sl., N. Y.
Clark & Hawley, 15 E. 9th st., Cincinnati, O.
Collier White Lead and Oil Co., Clark av., c. 10th st., St. Louis, Mo.
Colwell Lead Co., 63 Centre st., N. Y.
Cornell Lead Co., Delaware av., c. Virginia st., Buffalo, N. Y.
Davol, John & Sons, 100 John st., N. Y.
Detroit Lead Pipe and Sheet Lead Works, 57 2d st., Detroit, Mich.
Dubois Mfg. Co., 404 W. 25th st., N. Y.
Fearing, Wm. S., 100 Chambers st., N. Y.
Gibson, Thomas Co. (The), 273 Walnut st., Cincinnati, O.
Gibson & Price, 106 Columbus st., Cleveland, Ohio.
Hart, Lucius, & Co., 8 Burling sl., N. Y.
Haxtun, B., 172 Centre st., N. Y.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. Y.
Kellogg, Douglas & Co., 47 Mechanic st., Newark, N. J.
Kentucky Lead and Oil Co., 9th and Water sts., Louisville, Ky.
Keystone Lead Works, 603 Sansom st., Phila., Pa.
Leroy Shot and Lead Mfg. Co., 261 Water st., N. Y.
Lowe & Bro., 263 W. 12th st., N. Y.
McCollum, H. & Co., 53 W. 9th st., Cincinnati, Ohio.
Merchant & Co., 525 Arch st., Phila., Pa.
Merrie, Verhage & Co., 11 W. 7th st., Cincinnati, O.
Morrow & Strong, 115 1st st., San Francisco, Cal.
N. Y. Co-operative Lead Works (Ltd.), 525 E. 19th st., N. Y.
N. Y. Smelting and Refining Co. (The), West, c. Jane st., N. Y.
Northwestern Lead and Oil Co., 84 Pratt st., Chicago, Ill.
Phœnix Lead Co., 137 Murray st., N. Y.
Pierce, Butler & Pierce, Syracuse, N. Y.
Pope, Thos. J. & Bro., 292 Pearl st., N. Y.
Price, Wm. G. & Co., 33 Wood st., Pittsburgh, Pa.
Providence Lead Co., 75 S. Main st., Providence, R. I.
Queen City Lead Pipe Works, 262 Race st., Cincinnati, O.
Raymond Lead Co., Lake, c. Clinton st., Chicago, Ill.
Robertson, James & Co., 827 S. Howard st., Balt., Md.

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Rumsey, L, M. Mfg. Co., 810 N. 2d st., St. Louis, Mo.
St. Joseph Lead Co., 55 Liberty st., N. Y.
Salem Lead Co., 21 Pearl st., Boston, Mass.
Scott, J. B. & Co., 122-124 2d av., Pittsburgh, Pa.
Selby Smelting and Lead Co., 416 Montgomery st., San Francisco, Cal.
Smith, James M., 82 W. Van Buren st., Chicago, Ill.
Solomon, J. J., 125 S. Front st., Phila., Pa.
Sterling Lead and Zinc Co., 52 Broadway, N. Y.
Thompson, D. & Co., 215 Water st., N. Y.
Tatham & Bros., 82 Beekman st., N. Y.; 224 S. 5th st., Phila., Pa.
Union Lead Works (The), 26 Burling sl., N. Y.
Weiss & Allen Lead Co. (Ltd.) 528 E. 20th st., N.Y.
Western Lead Pipe and Sheet Lead Co., 163 Washington st., Chicago, Ill.
Williamsburgh Lead Pipe Works, 146 1st st., B'klyn, E. D., N. Y.

Lead—Bar, Pig and Sheet.

Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Blatchford & Co., E. W., Chicago, Ill.
Chadwick Lead Works, 173 High st., Boston, Mass.
Cincinnati Lead Pipe and Sheet Lead Works, 21-23 E. 9th st., Cincinnati, O.
Clark, Geo. W., 23 Burling sl., N. Y.
Clark & Hawley, 15-19 E. 9th st., Cincinnati, O.
Colwell Lead Co., 63 Centre st., N. Y.; Buffalo, N. Y.
Corwith, Nathan, 110 La Salle st., Chicago, Ill.
De Sauque & Co., 603 Sansom st., Phila., Pa.
Desloge Lead Co., 317 Chamber of Commerce, St. Louis, Mo.
Detroit Lead Pipe and Sheet Lead Works, Detroit, Mich.
Drummond, M. J., 65 Liberty st., N. Y.
Gerdes, F. W. & Bro., 1006 Penn av., Pittsburgh, Pa.
Germania Lead Works, Salt Lake City, Utah.
Haxtun, Benjamin, 172 Centre st., N. Y.
Hazard, Rowland, Providence, R. I.
Hendricks Bros., 49 Cliff st., N. Y.
Hoyt Metal Co., St. Louis, Mo.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Keystone Lead Works, 603 Sansom st., Phila., Pa.
Leroy Shot and Lead Mfg. Co., 261 Water st., N. Y.
Merchants' Shot Co., Front and Fayette sts., Balt., Md.
Mowry & Phillips, 120-134 Cross st., Boston, Mass.
N. Y. Co-operative Lead Works (Ltd.), 525 E. 19th st., N. Y.
N. Y. Smelting and Refining Co., Jane and West sts., N. Y.
Palmer Lead Co., Palmer, Mo.
Penna. Lead Co., 61 4th av., Pittsburgh, Pa.
Pope & Bro., Thos. J., 292 Pearl st., N. Y.
Price, Wm. G. & Co., 15 Wood st., Pittsburgh, Pa.
Raymond Lead Co., W. Lake, c. Clinton st., Chicago, Ill.
Rochester Lead Works, c. Furnace and Race sts., Rochester, N. Y.
Salem Lead Co., Salem, Mass.
Scott, James B. & Co., 122 2d av., Pittsb'gh, Pa.
Sparks, Thos. W., 121 Walnut st., Phila., Pa.
Tatham & Bros., 82 Beekman st., N. Y.; 224 S. 5th st., Phila., Pa.
Werrie, Verhage & Co., 11-13 W. 7th st., Cincinnati, O.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. x.

Leather Board.

Allen, C. L. & J. W., Amesbury, Mass.
Bailey, E. F., Ashland, N. H.
Baker, S. C., & Co., Ashland, N. H.
Bartlett & Nason, Haverhill, Mass.
Baxendale & Co., Brockton, Mass.
Binney, B. S., Shirley Village, Mass.
Brown & Wiley, Abington, Mass.
Carrecabe, J. M. & Co., 46 Lincoln st., Boston, Mass.
Clegg & Fisher, 136 Summer st., Boston, Mass.
Collins, F. J., & Co., 173 Summer st., Boston, Mass.
Colson, H. C., Abington, Mass.
Cushman, A. R., Amherst, Mass.
Davis, G. E., 119 High st., Boston, Mass.
Dawson, S. F., Lawrence, Mass.
Flax Leather Mfg. Co., 178 Devonshire st., Boston, Mass.
Hamlen & Sweeney, Lynn, Mass.
Harwood Mfg. Co., 91 Summer st., Boston, Mass.
Hill, W. F., & Co., Lynn, Mass.
Holt, J. S., & Co., 37 High st., Boston, Mass.
Larcome, R. E., Beverly, Mass.
Law, F. H., Lynn, Mass.
Leach, J. C., 91 Summer st., Boston, Mass.
Leatheroid Mfg. Co., 74 Bedford st., Boston, Mass.
Lewis, H. N., & Co., Walpole, Mass.
Loud, C. S., Abington, Mass.
Mason, Perkins & Co., Bristol, N. H.
Millers' River Paper Co., 26 Milk st., Boston, Mass.
Monsam Mfg. Co., Kennebunk, Me.
Nelson, J. A., Brockton, Mass.
Packard, D. S., & Co., Brockton, Mass.
Packard, S., & Co., 89 Bedford st., Boston, Mass.
Parker, H. A., & Co., East Pepperell, Mass.
Pinkham, Theo., 46 to 50 Federal st., Boston, Mass.
Pulsifer & Fuller, Auburn, Me.
Record, A., East Livermore, Me.
Roberts & Co., Amherst Mass.
Russell & Co., Lynn, Mass.
Sampson, E. H., 240 Purchase st., Boston, Mass.
Sherman & Co., Belfast, Me.
Smith, G. S., & Co., Haverhill, Mass.
Spaulding Bros., Townsend Harbor, Mass.
Sprague, W. N., 67 South st., Boston, Mass.
Wakeling & Clarkson, Brockton, Mass.
Wiggin, W. G., 61 State st., Portsmouth, N. H.

Leather—Lace.

Adams, Thos. B. & Co., 31 Federal st., Boston, Mass.
American Supply Co., 10 Exchange pl., Providence, R. I.
Arny, C. W. & Son, 228 N. 3d st., Phila., Pa.
Battles, E. W., Walpole, Mass.
Butler, R. A., Central Falls, R. I.
Coupe, Wm. & Co., South Attleboro, Mass.
Davis, James, Belting Co., Pawtucket, R. I.
England, Ira I., 25-31 Charles st., Providence, R. I.
Gates, Josiah & Sons, c. Dutton and Market sts., Lowell, Mass.
Jenekes, E., Mfg. Co., Pawtucket, R. I.
Jewell Belting Co., Hartford, Conn.
Martin & Wick, St. Louis, Mo.
Nichols, B. F., Holyoke, Mass.
Norwich Belt Mfg. Co., 35 Water st., Norwich, Conn.
Page Belting Co., Concord, N. H.
Pauton, John A., Quincy, Mass.
Popham, Henry & Son, East Newark, N. J.
Royer, H., San Francisco, Cal.
Schieren, Charles A., & Co., 47 Ferry st., N. Y.
Shultz Belting Co., cor. Bismarck & Barton sts., St. Louis, Mo.; 128 Pearl st., Boston, Mass.
Smith's, Lyman Sons, 43 High st., Boston, Mass.
Springfield Glue and Emery Wheel Co., 33-37 Taylor st., Springfield, Mass.
Tirrell, Leonard V., South Weymouth, Mass.
Weatherhead, Thompson & Co., Pawtucket, R. I.

Leather—Upholstering.

Harrison, C. H. & J. D., Newark, N. J.
Johnson, Thos. V., 18 Spruce st., N. Y.
MacEvoy, Chas., 34 Warren st., N. Y.
Palmer, Smith & Co., 67 Hamilton pl., Newark, N. J.
Salamon, R. G., 105 Sussex av., Newark, N. J.

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Letters—Enameled White.

Cæsar Brothers, 23 Park Row, N. Y.
Ingersoll Paint Works, 64 Fulton st., N. Y.
Teeling, J. A., 79 Sudbury st., Boston, Mass.

Letters—Glass.

Asbury Glass Sign Co. (The), 41 Dey st., N. Y.

Letters—Metal.

Bellows & Dickey, 833-839 Sheriff st., Cleveland, Ohio.
Benfield & Milne, Newark, N. J.
Callow, J. J., 53 Beech st., Cleveland, O. **53.**
Hoggson & Pettis Mfg. Co., 64-68 Court st., New Haven, Conn.
Novelty Iron Works, 3124 Market st., Phila., Pa.
Stutzman, J. M., 181 William st., N. Y.
Tinkham, S. M. & Sons, Taunton, Mass.

Levels.

Buff & Berger, 9 Province Court, Boston, Mass.
Gurley, W. & L. E., Troy, N. Y.
Harmon, John W., 65 Haverhill st., Boston, Mass.
Johnson, Wm., Newark, N. J.
Richardson, C. F., Athol, Mass.
Stanley Rule and Level Co., 29 Chambers st., N. Y.
Stratton Bros., Greenfield, Mass.
Weiss, Neubeck & Co., 111 Nassau st., N. Y.

Life Saving Apparatus for Boats.

Low, David W., Gloucester, Mass.

Life Saving Respirators.

Taylor, John & Co., 1st and Mission sts., San Francisco, Cal. **63.**

Life Preservers.

Asbestos Felting Works, 93 Maiden la., N. Y.
Beeching, R. & Co., 67 Blackstone st., Boston, Mass.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
George, E. & Co., 82 South st., N. Y.
Godfrey, Wm. H., 51 Fulton st., N. Y.
Goodyear's India Rubber Glove Mfg. Co., 503-505 B'way, N. Y.
Kahnweiler, David, 146-150 Worth st., N. Y.
Manhattan Awning & Cover Factory, 250 3d av., N. Y.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.

Lintels—Iron.

Armstrong Bros., Springfield, O.
Chambers & Macbeth, Cleveland, O.
Champion Iron Fence Co., Kenton, O.
Cheney & Hewlett, 201 B'way, N. Y.
Healy Iron Works, cor. N. 4th and 5th sts., B'klyn, N. Y.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, O.

Loans—Railway.

Hollis & Co., H. B., 18 Wall st., N. Y.

Locks—Car and Switch.

Dayton Mfg. Co., Dayton, O.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Russell & Erwin Mfg. Co., 43 Chambers st., N. Y.; 19 N. 5th st., Phila., Pa.; New Britain, Conn.
Stewart & Mattoon Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.

Lock Manufacturers.

Ahrend, H., 125 N. J. R. R. av., Newark, N. J.
Ahrens, J., 21 Forsyth st., N. Y.
Aurocker, T. H., 13 N. 13th st., Phila., Pa.
Automatic Tumbler Lock Co., 420 Library st., Phila., Pa.
Barnes Mfg. Co., 100 Chambers st., N. Y.; 76 Court st., New Haven, Conn.
Bates, L. L. & Co., 150 Portland st., Boston, Mass.
Bohannan, W., 1013 B'way, B'klyn, N. Y.
Branford Lock Works, 94 Chambers st., N. Y.; Branford, Conn.
Brunner, H. J., Kansas City, Mo.
Chabot, J. A., 17 Bowker st., Boston, Mass.
Champion Safety Lock and Novelty Co., 106 Canal st., Cleveland, O.
Charles Parker Co. (The), Meriden, Conn.
Chicago Hardware Mfg. Co., 29 Erie st., Chicago, Ill.
Cincinnati Safe and Lock Co., 43 Elm st., Cincinnati, O.
Consolidated Time Lock Co., 161-163 W. 3d st., Cincinnati, O.
Corbin Cabinet Lock Co., 24 Murray st., N. Y.; New Britain, Conn.
Cornwall & Patterson Mfg. Co. (The), Railroad av., Bridgeport, Conn.
Deitz, A. E., 69 Clymer st., B'klyn, N. Y.
Eagle Lock Co., 98 Chambers st., N. Y.; Plymouth, Conn.
Easton Lock and Mfg. Co., Easton, Pa.
Elbert, F., 117 Prince st., N. Y.
Ermoine, J., 542 W. Market st., Louisville, Ky.
Farrington, Whitney & Sewell, 68 N. 10th st., B'klyn, N. Y.
Farrington & Whitney, 37 Warren st., N. Y.
Flint, E. H., 938 Eastern av., Cincinnati, O.
Foster Bros. & Co., Middletown, Conn.
Fraim, E. T. & Bro., Lancaster, Pa.
Gasch, R., Washington, D. C.
Gilbert Lock Co., 136 Front st., Newark, N. J.
Grosz & Jenkins, 353 3d st., Louisville, Ky.
Haase, G. J., 127 Worth st., N. Y.
Hall, Wm. & Co., 4 Dock sq., Boston, Mass.
Hillebrand & Wolf, 110 S. 8th st., Phila., Pa.
Hall's Safe and Lock Co., Pearl, c. Plum st., Cincinnati, O.
Ham, L. M. & Co., 158 Portland st., Boston, Mass.
Helmstaedter, A., 67 N. J. R. R. av., Newark, N. J.
Huebel, J., 122 Green st., Newark, N. J.
Huebner, A., Tompkinsville, N. Y.
Isham Bank Lock Co., 79 Cornhill, Boston, Mass.
Jacob, D. C., Washington, D. C.
Keen, H. H. & Co., Lancaster, Pa.
Keller, G., Scranton, Pa.
Kempshall Mfg. Co., New Britain, Conn.
King, J. J., 132 W. 35th st., N. Y.
Klemann, P., 673-675 E. 156th st., N. Y.
Langstroth, T. W., 14 Mechanic st., Newark, N. J.
Leveridge, B. H., St. Paul, Minn.
Linde, F. C. & Co., Norwalk, Conn.
Lockwood Mfg. Co., Norwalk, Conn.
Louis, C., Ogdensburg, N. Y.
Ludovici & Heizenroeder, 116 Wooster st., N. Y.
McGovern, B., 30 Sterling st., Bridgeport, Conn.
McPherson, E. M., 79 Cornhill, Boston, Mass.
Macneale & Urban, 182 W. Pearl st., Cincinnati, Ohio.
Mallory-Wheeler Co. (The), 64 Reade st., N. Y.; New Haven, Conn.
Massa & Co., 234 Carter st., Phila., Pa.
Mighell & Richards, Market, c. Davis st., San Francisco, Cal.
Miller Lock Co., 821 Cherry st., Phila., Pa.
Moody Mfg. Co., 821 Cherry st., Phila., Pa.
Mosler, Bahmann & Co., Bank av., c. Kindel av., Cincinnati, O.
Mosler Safe and Lock Co., 86 Elm st., Cincinnati, Ohio.
Mossman, J. M., 101 Maiden la., N. Y.
Nashua Lock Co., 86 Pearl st., Boston, Mass.; Nashua, N. H.
National Safe and Lock Co., 86 Superior st., Cleveland, O.
New England Butt Co., 31 Pearl st., Providence, R. I.
Newhall, H. B. Co., 105 Chambers st., N. Y.
Nimick & Brittan Mfg. Co., 411 Wood st., Pittsburgh, Pa.

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Norwalk Lock Co., 82 Chambers st., N. Y.; Norwalk, Conn.; 47 Pearl st., Boston, Mass.
Norwich Lock Mfg. Co., 88 Chambers st., N. Y.; 71 Pearl st., Boston, Mass.
Novelty Lock Co., 15 N. Clinton st., Chicago, Ill.
O'Connell, P., Savannah, Ga.
Peerless Mfg. Co., 637 3d st., Louisville, Co.
Perkins Specialty Lock Co., 33 St. Clair st., Cleveland, O.
Phœnix Lock Works, 135-137 Halsey st., Newark, N. J.
Richardson, John & Son, 881 State st., New Haven, Conn.
Ritchie & Son, 294 Market st., Newark, N. J.
Robinson, E., 21 Brattle st., Boston, Mass.
Romer & Co., 277 Passaic st., Newark, N. J.
Sargent, Greenleaf & Brooks, 43 Franklin st., Chicago, Ill.
Sargent, Greenleaf & Co., 57 Sudbury st., Boston, Mass.
Sargent & Co., Water st., New Haven, Conn.
Sargent & Greenleaf, 101 Maiden la., N. Y.; 100 Court st., Rochester, N. Y.
Schroder, J. B., & Co., N. E. c. 3d & Elm sts., Cincinnati, O.
Slaight, T., 113 N. J. R. R. av., Newark, N. J.
Smith & Egge, Mfg. Co., Lafayette, c. Allen st., Bridgeport, Conn.
Stedenfeld, 25 Springfield av., Newark, N. J.
Stivers, A., & Son, 38 Mechanic st., Newark, N. J.
Stoddard Lock & Mfg. Co., Saybrook, Conn.
Thielman & Maul, 154 Mulberry st., Newark, N. J.
Tiebout, W. & J., 16 Chambers st., N. Y.
White & Marin, Savannah, Ga.
Whittingham, J., 335 Adams st., B'klyn, N. Y.
Wilcox, W., Mfg. Co., 82 Chambers st., N. Y.
William Wilcox Mfg. Co., Middletown, Conn.
Wilthey, C. W., 69 Clymer st., B'klyn, N. Y.
Yale & Towne Mfg. Co. (The), 62 Reade st., N. Y.; 224 Franklin st., Boston, Mass.; 25 Wash'n st., Chicago, Ill.; 15 N. 6th st., Phila., Pa.
Yeagley, Murphy & Co., Indianapolis, Ind.
York Safe & Lock Co., York Pa.

Locks—Money Seal.

Buffalo Seal & Press Co., 430 Niagara st., Buffalo, N. Y.

Locks—Sash.

Clafien Mfg. Co. (The), 71-73 Ontario st., Cleveland, O.
Nimick & Brittan Mfg. Co., 411 Wood st., Pittsburgh, Pa.

Locks—Time.

Consolidated Time Lock Co., 161 W. 3d st., Cincinnati, O.
European Lock & Time Lock Co., 161 W. 3d st., Cincinnati, O.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Yale & Towne Mfg. Co. (The), Stamford, Conn.

Lock Washers.

National Lock Washer Co., 52 Lawrence st., Newark, N. J.

Locomotive Frames.

Boston Bridge Works, 70 Kilby st., Boston, Mass.
Buffalo Steam Forge, 24 Hazen Bldg., Buffalo, N. Y.
Western Forge & Rolling Mills, 210 N. 3d st., St. Louis, Mo.

Locomotive Builders.

Adams & Price Locomotive & Machine Works, 6 Vauxhall st., Nashville, Tenn.
Baldwin Locomotive Works, Phila., Pa. **16.**
Bass Foundry & Machine Works, Fort Wayne, Ind.
Boyle, Thos., G., & Co., 708 Penn av., Pittsb'gh, Pa.
Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Burnham, Parry, Williams & Co. (Baldwin Locomotive Works), 500 N. Broad st., Phila., Pa.
Canadian Locomotive & Engine Co. (Ltd.), Kingston, Ont.
Case, L., Schenectady, N. Y.
Clayton's Air Compressor Works, 45-47 York st., B'klyn, N. Y. **9.**
Cochnower, Perrin & Co., 57 Oliver st., Boston, Mass.
Cooke Locomotive and Machine Co., Paterson, N. J.; 45 Broadway, N. Y.
Dickson Mfg. Co., Scranton, Pa.
Fifield, G. E., So. Newmarket, N. H.
Fleming & Sons, St. Johns, N. B.
Godwin, P. W. & Co., Norfolk, Va.
Grant Locomotive Works, Paterson, N. J.; 43 Wall st., N. Y.
Hazleton Iron Works, Hazleton, Pa.
Hinckley Locomotive Co., 439 Albany st., Boston, Mass. **62.**
Hinckley, Spiers & Hayes, 213 Fremont st., San Francisco, Cal.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Lima Machine Works, Lima, O.
Lombard, Geo. R. & Co., Augusta, Ga.
McQueen Locomotive Works, Schenectady, N. Y.
Manchester Locomotive Works, Manchester, N. H.; 40 Water st., Boston, Mass.
Mason Machine Works, Taunton, Mass., 115 Broadway, N. Y.
Milhoeland, J. & J. B., 5th av. and Tunnel st., Pittsburgh, Pa.
Mt. Savage Locomotive Works, Mt. Savage, Md.
Montour Iron and Steel Co. (The), 216 S. 3d st., Phila., Pa.
N. Y. Locomotive Works, Rome, N. Y.; 34 Pine st., N. Y.
North Pacific Iron Works, Seattle, W. T.
Pittsburgh Locomotive and Car Works, Pittsburgh, Pa. **63.**
Porter, H. K. & Co., 430 Beaver st., Pittsburgh, Pa.
Portland Locomotive Works, 18 B'way, N. Y.
Portland Co., Portland, Me.
Rhode Island Locomotive Works, Providence, R. I.; 36 Cedar st., N. Y.
Richmond Locomotive and Machine Works, Richmond, Va. **12.**
Risdon Iron and Locomotive Works (Beale & Howard), San Francisco, Cal.
Ritchie & Dyer Co., Hamilton, O.
Roanoke Machine Works, Roanoke, Va.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Rogers Locomotive and Machine Works, Paterson, N. J.; 44 Exchange pl., N. Y.
Savage Locomotive Works, 115 Broadway, N. Y.
Schenectady Locomotive Works, Schenectady, N. Y.
Spangenberg, Pendleton & Co., Warren, O.
Strong Locomotive Co., 239 Broadway, N. Y.
Taunton Locomotive Mfg. Co., Taunton, Mass.
Union Iron Works, Mission, c. 1st st., San Francisco, Cal.
Virginia Iron Works, Norfolk, Va.
Vulcan Iron Works, Wilkesbarre, Pa.
Walkley & Co., 10 Wall st., N. Y.
Wyoming Valley Mfg. Co., Wilkesbarre, Pa.

Locomotives—Second Hand.

Buss & Norton, 138 Jackson st., Chicago, Ill.
Cahill, Collins & Co., St. Louis, Mo.
Carey, Geo. H., 1 B'way, N. Y.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Humphreys & Sayce, 1 B'way, N. Y.
Leavitt, C. W. & Co., 161 B'way, N. Y.
Middleton, W. S., 52 John st., N. Y.
N. Y. Equipment Co. (The), 10 Wall st., N. Y. **95.**
N. Y. Railway Supply Co., 40 Wall st., N. Y.
Walley & Co., 10 Wall st., N. Y.

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*Locomotive Bell Ringers.

National Iron and Brass Works, Dubuque, Ia.

Locomotive Repairers.

Columbus Machine Co., Columbus, O.

Locomotive Trimmings.

Greeley, E. S. & Co., 5-7 Dey st., N. Y.

*Logging—Equipment.

Barrows & Co., 16 B'way, N. Y.
Tolman, J. P. & Co. (Sampson Cordage Works), 164 High st., Boston, Mass. **47.**

Lubricants.

Alexander & Co., 306 Robinson st., Allegheny, Pa.
Ayers, N. G. & Co., 167 Lacock st., Allegheny, Pa.
Borne, Scrymser & Co., 605 Smithfield st., Pittsburgh, Pa.; 224 Front st., N. Y.
Buxton, Heins & Co., 13 Spruce st., N. Y.
Cook, Adam, 313 West st., N. Y.
Crescent Mfg. Co., 305 Michigan st., Cleveland, Ohio.
Czarnieckl, J. H., 43 1st st., Allegheny, Pa.
Dalzell's, Jas. Son & Co. (Ltd.), 67 Water st., Pittsburgh, Pa.
Davis & Kling, 95 5th av., Pittsburgh, Pa.
Dixon Crucible Co., Jersey City, N. J.; 68 Read st., N. Y.
Dreher Mfg. Co. (The), 87 Platt st., N. Y.
Eagle Lubricating and Refining Co., 251 Front st., N. Y.
Fralich, E. C., Ann, n. Stevenson st., Pittsburgh, Pa.
Frisbee, T. S., Superior st., Allegheny, Pa.
Gaytons, Hugh, 1152 Penn av., Pittsburgh, Pa.
Graphite Lubricating Co., 260 Wash'n st., Jersey City, N. J.
Johnson, H. J., 530 Water st., N. Y.
Kassow Bros., Buffalo, N. Y.
Kellogg, E. H. & Co., 243-244 South st., N. Y.
Miller, Wm. P. Co., 100 Greenpoint av., B'klyn, N. Y.
Morton, Howard, 605 Smithfield st., Pittsburgh, Pa.
Newark Lubricating Co., 149 Chestnut st., Newwark, N. J.
Noyes Mfg. Co. (The), 47 India st., Boston, Mass.
Peaty & Perry, 38 Cortlandt st., N. Y.
Pulver, Peter & Sons, 257 West st., N. Y.
Robbock, Henry F., 33d and Smallman sts., Pittsburgh, Pa.
St. Albans Cooling Compound Co., St. Albans, Vt. **92.**
Stuart, D. A. & Co., 8 State st., Chicago, Ill.
Turner, Chas. A., 14 Market st., Pittsburgh, Pa.
Union Compound Co., Portland, Me.
Upson's Oil and Soap Co., Parkersburgh, W.Va.
Urquhart, John S., 46 Cortlandt st., N. Y.
Williams, Jos. S., Canal, n. 17th st., Pittsburgh, Pa.
Wm. P. Miller Co. (The), 100 Greenpoint av., B'klyn, E. D., N. Y.
Willock, S. M., 5 6th av., Pittsburgh, Pa.

Lubricators.

Acme Lubricator Co., Detroit, Mich.
A. L. Co. (The), 99 Abbott st., Detroit, Mich.
Andres, H., 22 N. 4th st., Phila., Pa.
Appleton, A., 45 Cortlandt st., N. Y.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Barthel, A. E., 111 Liberty st., N. Y.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Bell, Benj. P., 540 Canal st., N. Y.
Bennett Mfg. Co., 65 Board of Trade, Chicago,
Benton & King Co., 86 John st., N. Y.
Boston, Brass Co., 42 Oliver st., Boston, Mass.
Cincinnati Brass Works, Cincinnati, O.
Colville & Stewart, 108 Lake st., Chicago, Ill.
Couse & Johns, 365 Market st., Newark, N. J.
Crosby Steam Gauge and Valve Co., 95-97 Oliver st., Boston, Mass.
Detroit Lubricator Co., 129 Griswold st., Detroit, Mich.
Engineers' Tools and Supplies (John S. Hall), 40 Cortlandt st., N. Y.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Graham & Johnson, 162 S. Clinton st., Chicago, Ill.
Grand Rapids Lubricating Co., Grand Rapids, Mich.
Graphite Lubricating Co., 260 Washington st., Jersey City, N. J
Hoffman Lubricator Co., Binghamton, N. Y.
Holland & Thompson, 217 River st., Troy, N. Y.
Lang, J. & Co., 44 Michigan st., Chicago, Ill.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Lonergan, John E. & Co., 211 Race st., Phila., Pa.
Lunkenheimer, F., Cincinnati, O.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Main & Harris, 12 Coenties sl., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Michigan Lub. Co., c. Brush and Lafayette sts., Detroit, Mich.
Minneapolis Tubular Well Co., 224 Washington av., N., Minneapolis, Minn.
Nathan Mfg. Co., 92 Liberty st., N. Y.
Newark Lubricator Co., 365 Market st., Newark, N. J.
Parke & Lacy, 8 California st., San Francisco, Cal.
Parker, Chas. W., 14 N. Canal st., Chicago, Ill.
Renchard, J. V., Detroit, Mich.
Seibert Cylinder Oil Cup Co., 92 Liberty st., N. Y.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.
Swift, Allen W., Elmira, N. Y.
Thomas, Culver & Thomas, Pittston, Pa.
U. S. Car Axle Lubricating Co., 47 5th av., Chicago, Ill.
Warth, Albin, Stapleton, Staten Island, N. Y.
Wm. Powell Co. (The), 50-54 Plum st., Cincinnati, O.

Lubricators—Automatic.

American Ship Windlass Co., Providence, R. I. **xii.**
Donegan & Swift, 174 Fulton st., N. Y.
U. S. Car Axle Lubricating Co., 47 5th av., Chicago, Ill.

Lubricators—Cylinder.

Delaney, H. J. & Co., 126 Clybourn st., Milwaukee, Wis.
Morris Machine Works, Baldwinsville, N. Y.
New England Brass Works, 135 Oliver st., Boston, Mass.

Lubricators—Locomotive.

Detroit Lubricator Co., 11 Rowland st., Detroit, Mich.
Hoffman Lubricator Co., Binghamton, N. Y.
Nathan Mfg. Co., 92 Liberty st., N. Y.
Siebert Cylinder Oil Cup Co., 53 Oliver st., Boston, Mass.

Lubricators—Light Feed.

Aller, A., 109 Liberty st., N. Y.
Detroit Lubricator Co., 129 Griswold st., Detroit, Mich.
Nathan Mfg. Co., 92 Liberty st., N. Y.
Sweetser, Wm. A., 39 Montello st., Brockton, Mass.

Lubricators—Pulley.

Loose Pulley Lubricator Mfg. Co., Middletown, Conn.
Van Duzen & Tift, 102-104 E. 2d st., Cincinnati, O. **57.**

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Lumber—Car and R. R.

Albro, E. D. Co., 685-711 W. 6th st., Cincinnati, O.
Atlanta Lumber Co., Atlanta, Ga.
Barker, S. B. & Co., Chicago, Ill.
Beaumont Lumber Co., Beaumont, Tex.
Berwick, C. & Co., Hazlehurst, Ga.
Brister, B. E. & Co., Bogue Chitto, Miss.
Brookhaven Lumber and Mfg. Co., Brookhaven, Miss.
Burton Lumber Co., Baton Rouge, La.
Chicago Lumber Co., 85th and Iron sts., Chicago, Ill.
Chopin Lumber Co., 409 N. 3d st., St. Louis, Mo.
Cooney, Eckstein & Co., 168 Pearl st., N. Y.
De Camp & Wilson, 88 Cortlandt st., N. Y.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Desha Lumber and Planting Co., 60 Congress st., Boston, Mass.
East Saginaw and Averill Lumber Co., East Saginaw, Mich.
Empire Lumber Co., Chattanooga, Tenn.
Fremont & Ryan, Atlanta, Ga.
Goodman, Wright & Foster, Cincinnati, O.
Goodyear, D. A. & C. A., Tomah, Wis.
Hall & Ducey Lumber Co., ft. 4th av., N., Minneapolis, Minn.
Hatch & Keith, Canalport av. and 21st st., Chicago, Ill.
Jackson Lumber Co., Lockport, N. Y. **21.**
Kaw Valley Lumber Co., 9th st. and Broadway, Kansas City, Mo. **16.**
Keystone Lumber Co , Bogue Chitto, Miss.
Lutcher & Moore, Orange, Tex. **51.**
McAmbley, C. F. & Co', Bradford, Pa.
Mengel, Jr., C. C. & Bro., Louisville, Ky.
Piedmont Lumber Co., 40 Marietta st., Atlanta, Ga.
Raiguel, W. H. & Co., Grand Rapids, Mich.
Rathborne, Joseph & Co., ft. Randolph st., Chicago, Ill.
Reliance Lumber Co., Beaumont, Tex.
Schulenburg & Boeckeler Lumber Co., St. Louis, Mo.
South Branch Lumber Co., ft. Fisk st., Chicago, Ill.
Spry Lumber Co., Chicago, Ill.
Stone, B. B., Lumber Co., Com'l Nat. Bank Bldg., Chicago, Ill.
Strickland, F. P., & Co., Kansas City, Mo. **23.**
Tennessee Lumber Co., Cincinnati, O.
White, J. J., McComb City, Miss.
Youmans, I. J., Hazlehurst, Ga.

Lumber—Creosoted.

Carolina Oil & Creosote Co., Wilmington, Del. **48.**
Lehigh Valley Creosoting Co., Perth Amboy, N. J.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**

Lumber Dealers.

Ackerman, J. E., & Co., ft. W. 28th st., N. Y.
Allen & Stevens, ft. W. 47th st., N. Y.
Am. Lumber Co . 55 Liberty st., N. Y.
Apalachicola Lumber Co., 18 B'way, N. Y.
Arnold & Wendt, 177 Greenwich st., N. Y.
Aviles Bros., 381 South st., N. Y.
Baldwin & Baker, 553 W. 34th st., N. Y.
Bartlett, P. T., 242 S. Water st., Chicago, Ill.
Beebe, Dillon, 15 State st., N. Y.
Bell Bros., 11th av., c. W. 21st st., N. Y.
Benedict, Grace A., 554 1st av., N. Y.
Bickford, Knox & Co., 246 S. Wate. st., Chicago, Ill.
Boardman & Small, 115 Wall st., N. Y.
Boynton, Frederick C., 23 Beaver st., N. Y.
Boynton, Theodore V., 23 Beaver st., N. Y.
Breen & Taylor, ft. W. 29th st., N. Y.
Brickelmaier, Peter P., 505 W. 14th st., N. Y.
Brown, Andrew, 58 Pine st., N. Y.
Brumme, Alfred, 419 E. 23d st., N. Y.
Buckhout, Abram T., 415 E. 28th st., N. Y.
Bucki, Chas. L., & Co., ft. W. 13th st., N. Y.
Bucki, L., & Son, ft. W. 13th st., N. Y.
Budlong, Alfred W., 102 11th av., N. Y.
Burdick, Isaac N., 339 West st., N. Y.
Burdick, Nathan L., 154 Bank st., N. Y.
Burroughs, Horace F., 21 Beaver st., N. Y.
Bussell, Elizabeth G., 11 Doyers st., N. Y.
Bussell, Rich. H., 9 Murray st., N. Y.
Cadle, W. L., 22d, c. Lumber st., Chicago, Ill.
Cannon, John H., 31 South st., N. Y.
Carlen, Alfred, 16 Exchange pl., N. Y.
Carr, John F., 543-547 W. 23d st., N. Y.
Carroll, Daniel J., 525 W. 14th st., N. Y.
Case & Co., 200 B'way, N. Y.
Chapin, James M., 237 B'way, N. Y.
Chandler & Dubois, 46 South st., N. Y.
Chase, James S., 242 S. Water st. (Room 6), Chicago, Ill.
Chase, Talbot & Co., 30 South st., N. Y.
Chellborg, C. Frederick, 17 B'way, N. Y.
Clarke, Henry M., 72 Wall st., N. Y.
Cohoes Patent Lumber Co., 88 Park row, N. Y.
Colwell, James W., S. Boulevard, c. 3d av., N. Y.
Colwell, W. H. & Co., E. 129th st., n. 3d av., N. Y.
Cooke, Augustus P., 320 Madison av., N. Y.
Cooney, Eckstein & Co., 168 Pearl st., N. Y.
Cormier & Lingham, 205 Lewis st., N. Y.
Crane & Clark, ft. W. 30th st., N. Y.
Crary, Jesse D., 72 Wall st., N. Y.
Cross, Fordon & Randall, 320 Madison av., N. Y.
Dalley, John, 352 West st., N. Y.
Daniels & Co., 302 Centre st., N. Y.
Dannatt & Pell, 24 Tompkins st., N. Y.
Davis, Charles W., 36 Cologne st., Chicago, Ill.
Decamp & Wilson, 88 Cortlandt st., N. Y.
Decker, A. F. & Co., 35 B'way, N. Y.
Delatour, Albert J., 176 Cherry st., N. Y.
Delatour, Geo. L., 258 Cherry st., N. Y.
Disoway, E. G., 340 W. Houston st., N. Y.
Dodge, A. M. & Co., 18 Cortlandt st., N. Y.
Dodge, Meigs & Co., 72 Wall st., N. Y.
Douglass, Geo., 318 West st., N. Y.
Doup, Edw. R., 609 W. 24th st., N. Y.
Dowd, Olney B., 286 Av. A N.Y.
Dumbar Box and Lumber Co., 282 11th av., N. Y.
Dunbar, John, 346 Front st., N. Y.
Dunbar, M. P., Co., 18 Broadway, N. Y.
Duryee, Jos. W., ft. E. 35th st., N. Y.
Eppinger & Russell, 160 Water st., N. Y.
Essroger, Bernard, 242 S. Water st., Chicago, Ill.
Export Lumber Co. (Ltd.), 142 Pearl st., N. Y.
Fischer & Burnett Lumber Co., 62 10th av., N. Y.
Fogg, Ezra D. Co , 12 B'way, N.Y.
Forbes, Rob't W., 14 S. William st., N. Y.
Fraser, James, 242 S. Water st. (Room 1), Chicago, Ill.
Frazier, Steph. R., 252 B'way, N. Y.
Gard's, S. H. Sons, 10 E 14th st., N. Y,
Gardner, Oliver L., 49 Liberty st., N. Y.
Garrick, John, 242 S. Water st. (Room 2), Chicago, Ill.
Gates, Church, E. & Co., E. 138th st., n. Railroad av., N. Y.
Gaylord, Don A. & Co., 511 W. 35th st., N. Y.
Genet, L. F., 606 W. 29th st., N. Y.
Georgian Bay Cons. Lumber Co., 15 Cortlandt st., N. Y.
Gibson, Wm., 59 10th av., N. Y.
Gibbs, Olney G., 254 W. 22d st., Chicago, Ill.
Godfrey, Wilson, 91 Wall st., N. Y.
Goodenow & Hinds, 240 S. Water st., Chicago, Ill.
Gorth's, Peter, Son, 109 Eldridge st., N. Y.
Gravel, A., Lumber Co. (Ltd.), 82 Wall st., N. Y.
Green, Garret E., 521 West st., N. Y.
Gustorf, Fred., 242 S. Water st. (Room 16), Chicago, Ill.
Gunderson, Severt T., 238 S. Water st., Chicago, Ill.
Hagemeyer, Geo., 414 8th st., N. Y.
Hall & Buell, 140 Pearl st., N. Y.
Hammer, John J., Jr., 22 Mangin st., N. Y.
Hanson & Crombie, E. 92d st , n. 1st av., N. Y.
Havens, J. H. & Son, 11th av., c. W. 56th st., N. Y.
Hawes, Willard & Co., 218 Lewis st., N. Y.
Hayward, Ambrose D., 236 S. Water st., Chicago, Ill.
Herrmann, Henry, 178 Mott st., N. Y.
Hilton Timber and Lumber Co., 81 New st., N. Y.

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Hodsdon, Chas. F., 742 Water st., N. Y.
Hofferberth, Chas., 529 W. 21st st., N. Y.
Horn, Wm. H., 238 S. Water st., Chicago, Ill.
Horton, A. J., r. 7 1st st., N. Y.
Horton, Chas. G., 101 W. 14th st , N. Y.
Horton, Wm. W., 158 Wooster st., N. Y.
Houghton C. L. & W., 305 11th av., N. Y.
Hoyt, David, 286 Cherry st., N. Y.
Hunter, Benn & Co., 2 Stone st., N. Y.
Jager, E. C. & Sons, 242 S. Water st. (Room 4), Chicago, Ill.
Johnson, Jarvis, 95 Liberty st., N. Y.
Johnson Bros., 3 Broome st., N. Y.
Johnson & Gibbs, 248 S. Water st., Chicago, Ill.
Jones, D. S. & Co., 26 South st., N. Y.
Karr, Geo. & Co., 344 West st., N. Y.
Kendall, Edw. K., 19 Whitehall st., N. Y.
Kendall, James S., 19 Whitehall st., N. Y.
Kilpatrick & Co., 839 11th av., N. Y.
Knapp, A. & W., 2456 3d av., N. Y.
Knox, Geo. H., ft. W. 130th st., N. Y.
Krum & Williams, 22d, N.W. cor. Laflin st., Chicago, Ill.
Labatut, Geo. P., 151 Centre st., N. Y.
Lamb Bros., 1 B'way, N. Y.
Langdon, Chas. S., 111 Water st , N. Y.
Lavelle, O., 58 Pine st., N. Y.
Leeb, Chas. B., 18 B'way, N. Y.
Lewis, Edward B., 196 La Salle st. (Room 16), Chicago, Ill.
Lord, A. H., 161 La Salle st. (Room 4), Chicago, Ill.
Lowry, Rob't C. & Co., 6 State st., N. Y.
Ludington, Edwin P., 511 W. 14th st., N. Y.
Lynch, John, 11th av., c. W. 21st st., N. Y.
McClave, E. W. & Co., 18 B'way, N. Y.
McClave, John, 610 W. 23d st., N. Y.
McDonough & Co., ft. E. 125th st., N. Y.
McElwee, Billings & Carney, 244 S. Water st., Chicago, Ill.
McGrath & Gidney, 371 West st., N. Y.
McIlroy, Wm., 10 E. 14th st., N. Y.
McKee, Geo. W., 92 Market st., N. Y.
McLaren & Morris, 2 Franklin st., Chicago, Ill.
Magee, Wm. T. & Co., 284 West st., N. Y.
Marsh, Wm. E., 82 Wall st., N. Y.
Martin, J. W. & Co., 265 6th av., N. Y.
Mason, Jno. S. & Co., 240 11th av., N. Y.
Meglade, William, 236 S. Water st. (Room 3), Chicago, Ill.
Meiners, Jno. R., Bloomfield, n. West st., N. Y.
Metz, W. H., & Co., Louisville, Ky. 58.
Millard & Collingwood, 265 B'way, N. Y.
Millen, L. R. & Co., 16 Beaver st., N. Y.
Millward & Co., 80 West st., N. Y.
Monteath, Jno. H., 135 Centre st., N. Y.
Moore, David, 58 Dearborn st., Chicago, Ill.
Morton Lumber Co., 35 B'way, N. Y.
Murchie, Horace B. & Co., 82 Wall st., N. Y.
Neely, John, 22 Mangin st., N. Y.
Newell, D. C. & Sons, ft. W. 19th st., N. Y.
N. Y. Export Timber Co., 35 B'way, N. Y.
N. Y. Hardwood Lumber Co., 11th av., c. W. 14th st., N. Y.
N. Y. Lumber Drying Co., 11th av., c. W. 29th st., N. Y.
N. Y. Lumber & Wood Working Co., E. 134th st., c. Alexander av., N. Y.
N. Y. & Santo Domingo Lumber & Mining Co., 32 Liberty st., N. Y.
N. Y. Southern Lumber Co., 16 Beaver st., N. Y.
Normandale Lumber Co., 72 Wall st., N. Y.
Norton & Christman, 160 11th av., N. Y.
Ogden, E. H. & Co., ft. W. 22d st., N. Y.
Ogden & Co., 411 Washington st., N. Y.
Parks, Wm. A. & Co., 18 Broadway, N. Y.
Patry, Peter, 11th av., c. W. 29th st., N. Y.
Patterson, Thos. G., 459 West st., N. Y.
Pearl, L. C. & Co., 101 W. 14th st., N. Y.
Peek, Eben, 11th av., c. W. 24th st., N. Y.
Porter, Frank & Co., 242 S. Water st., Chicago, Ill.
Price, Ernest M., 16 Exchange pl., N. Y.
Purmort, Henry C., Lumber, c. 22d st., Chicago, Ill.
Rayner, Julius, ft. E. Houston st., N. Y.
Reamer, Job M., 38 Park Row, N. Y.
Reeves, Oatman & Co., 129 Pearl st., N. Y.
Reynolds Bros., 236 S. Water st. (Room 5), Chicago, Ill.
Richardson, James & Putney, 18 Broadway, N.Y.
Risley, Jos. H., 39 South st., N. Y.
Robinson & Booth, 91 Wall st., N. Y.
Rogers, Chas. E. & Co., 108 Wall st., N. Y.
Ross, Jno. J., 606 W. 24th st., N. Y.
Ruger & Durgin, 240 S. Water st., Chicago, Ill.
St. Simons Lumber Company, 72 Wall st., N. Y.
Saulpaugh, M. J. & Son, 180 Lewis st., N. Y.
Schuyler, G. L. & Co., 1st av., c. E. 98th st., N. Y.
Schwartz, J. B. & Sons, 416 6th av., N. Y.
Seaboard Lumber Co., 12 Broadway, N. Y.
Shadbolt, Sydney H., 3 Bowling Green, N. Y.
Shearman, Thos., 193 Front st., N. Y.
Shudtz, Chas. P., 54 S. 5th av., N. Y.
Simonson, T. H. & Son, ft. E. 100th st.
Simpson, Clapp & Co., 129 Broad st., N. Y.
Southard & Co., 18 Broadway, N. Y.
Southwestern Lumber Co. (Ltd.), 10 W. 23d st., N. Y.
Starr, Walter D., 518 W. 15th st., N. Y.
Steers, Abraham, ft. E. 125th st., N. Y.
Stevens, Chauncey, 78 10th av., N. Y.
Stocksdale, Jacob P., 80 Wall st., N. Y.
Stone, Leander, 424 E. 53d st., N. Y.
Thompson, Jos. R. H., 46 10th av., N. Y.
Tobyhanna and Lehigh Lumber Co., 72 Wall st., N. Y.
Tolan, Simpson, 199 11th av., N. Y.
Trimble Mill and Lumber Co. (Ltd.), 202 11th av., N. Y.
U. S. Wood Vulcanizing Co., 327 Avenue B, N. Y.
Uptegrove, Wm. E., & Bro., 465 E. 10th st., N. Y.
Van Emburg, Geo. L., 144 11th av., N. Y.
Walling, Edw. P., 72 Wall st., N. Y.
Waterbury, Isaac N., 142 Mangin st., N. Y.
Waterhouse & Lester, 159 Front st., N. Y.
Watson, Geo., Rider av., n. E. 140th st., N. Y.
Western Lumber Co., 10 E. 14th st., N. Y.
Wetmore, Abram B., 1285 B'way, N. Y.
Wheelwright, Wm. D., & Co., 82 Wall st., N. Y.
White & Rider, 104 Wall st., N. Y.
White, Samuel F., 242 S. Water st. (Room 16), Chicago, Ill.
Whitman, Geo. B., 196 La Salle st. (Room 16), Chicago, Ill.
Whitney, F. B., & Co., 411 W. 15th st., N. Y.
Wilcox, Edwin R., 53 Tompkins st., N. Y.
Williams, Ichabod T., 221 11th av., N. Y.
Willson, Adams, & Co., ft. E. 42d st., N. Y.
Woodley, Geo., 242 S. Water st., Chicago, Ill.
Woods, Jno. S., 17 B'way, N. Y.
Wright, Aaron E., 146 W. 38th st., N. Y.
Wyatt, Irving, 10 E. 14th st., N. Y.
Youngs, Wm. F., ft. 3d st., N. Y.

Lumber—Hardwood.

Albion Lumber Co., 175 Dearborn st. (Room 56), Chicago, Ill,
Albro, E. D. Co., 685 6th st., Cincinnati, O.
American Stave & Timber Co., 113 Tribune Bldg., N. Y.
Appleby, R. B., 24 N. Morgan st., Chicago, Ill.
Astoria Veneer Mills & Lumber Co., 1000 Fulton st., Louisville, Ky.; 120 E. 13th st., N. Y.
Aviles Bros., 123 Front st., N. Y.
Backus, A., Jr., 505 Fort W., Detroit, Mich.
Bayard, Henry & Co., 2900 N. Broad st., Phila., Pa.
Bearse, Owen, & Son, 887 Albany st., Boston, Mass.
Bearss, J. H., 492 Lafayette av., Detroit, Mich.
Benners, Wm. J., & Sons, 30th, bel. Walnut st., Phila., Pa.
Bliss, S. W. & W. H., Nashville, Tenn.
Bogue, C. H., & Co., 500 Lumber st., Chicago, Ill.
Boyle, L. V., & Co., 135 N. Halsted st., Chicago, Ill.
Brady, Samuel, 460 Fort W., Detroit, Mich.
Brooks & Ross Lumber Co., 242 S. Water st., Chicago, Ill.
Buffum, J., & Co., 32 Canal st., N. Y.
Campbell & Nowlin, 34 Buhl Blk., Detroit, Mich.
Candee & Co., 242 S. Water st. (Room 20), Chicago, Ill.

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Carter, T. D., 153 La Salle st., Chicago, Ill.
Case, W. V., Lumber Co. (Ltd.), 407 Walnut st., Phila., Pa.
Chamberlin & Richford, 54 Kilby st., Boston, Mass.
Chippewa Lumber Co., 222 Park st., Detroit, Mich.
Crane, W. B. & Co., 21st, c. Canalport av., Chicago, Ill.
Cuthbert, James O., 37 Adams Ex. Bldg., Chicago, Ill.
Dannat & Pell, 23 Tompkins st., N. Y.
Davenport, Peters & Co., 40 Kilby st., Boston, Mass.
David, Tucker, 72 Wall st., N. Y.
Desha Lumber and Planting Co., 60 Congress st., Boston, Mass.
Dick, A. B., Co., 254 E. Lake st., Chicago, Ill.
Dickason & Schenck, 505 Rialto Bldg., Chicago, Ill.
Dodge, Holmes & Smith, 426 Lumber st., Chicago, Ill.
Druhe Hardwood Lumber Co., Clark av., St. Louis, Mo.
Dunbar, M. P., Co., 25 William st., N. Y.
Dwight, Wm. M. & Co., Scotten av. and M. C. R. R., Detroit, Mich.
East Saginaw and Averill Lumber Co., East Saginaw, Mich.
Eastman Bros. & Co., 11 Central st., Boston, Mass.
Emery, Geo. D., 54 Canal st., Boston, Mass.
Frost's Lumber Works, Wright, nr. ft. of Lieb st., Detroit, Mich.
Glenwood Mfg. Co., Glenwood, Wis.
Graham, John R., Jr., 11th av. and 30th st., N. Y.
Granger, R. & Co., North Branch, c. Eastman st., Chicago, Ill.
Guckert, Wm., & Co., Cherry and Strawberry alls., Pittsburgh, Pa.
Guenther, E., 1722 Wash'n av., Phila., Pa.
Hagemeyer, Geo., ft. E. 11th st., N. Y.
Hammond, Edward & Co., 55 Kilby st., Boston, Mass.
Haring, Ledra W., yard, Fulton, S. E. c. Union st., Chicago, Ill.
Hatch & Keith, Canalport av. and 21st st., Chicago, Ill.
Hayden Bros., Jefferson and 22d sts., Chicago, Ill.
Himmelberger, I. & Co., Buffington, Mo.
Hirsch & Bro., L., 42 S. Clinton st., Chicago, Ill.; 214 Centre st., N. Y.
Hoffman Bros., Fort Wayne, Ind.
Holbrook Hardwood Lumber and Timber Co., Grove and 18th sts., Chicago, Ill.
Houston, Geo. T. & Co., 242 S. Water st. (Room 3), Chicago, Ill.
Hungerford & Co., 18th, c. Canal st., Chicago, Ill.
Hunt, Wm. F., North Branch, c. Eastman st., Chicago, Ill
Indiana Lumber Co., Nashville, Tenn.
Jackson Lumber Co., Lockport, N. Y. **21.**
James, J. H., Bangor, Me.
Johns & Co., 59 Southport av., Chicago, Ill.
Kaw Valley Lumber Co., 9th st. and B'way, Kansas City, Mo. **16.**
Kelsey, L. A. & Co., Tonawanda, N. Y.
Kimberland & Co., 612 Duquesne way, Pittsb'gh, Pa.
King, W. O. & Co., 113 E. Monroe st. (Room 6), Chicago, Ill.
Laird, Norton Co., Winona, Minn.
Larkins, Robert, Union pl. & 22d st., Chicago, Ill.
Lawrence & Pollard, 16 Central st., Boston, Mass.
Leech, E. W., 12th st. and Michigan av., Detroit, Mich.
Lieberman, Loveman & O'Brien, Nashville, Tenn.
Lime Island Mfg. Co., 66 Congress st., W., Detroit, Mich.
Litchfield Lumber Co., 71 Kilby st., Boston, Mass.
Lloyd, Wm. M., Co. (Ltd.), 29th st. and Ridge av., Phila., Pa.
McFarland, Thos., W. Kinzie, c. Morgan st., Chicago, Ill.
Maley, Threlkeld & Co., 104 Water st., Boston, Mass.
Mann Bros., 6 Wabash av., Chicago, Ill.
Martin, John, Lumber Co., 116 W. 7th st., St. Paul, Minn.
Martin & Barriss, 130 Central way, Cleveland, O. **51.**
Mason, John S. & Co., 221 11th av., N. Y.
Mengel, C. C., Jr., & Bro., Louisville, Ky.
Messinger, Chas. T., Dominick, c. B st., Chicago, Ill.
Miller, L. & Co., Lumber, c. W. 22d st., Chicago, Ill.
Monteath, J. H., 135 Centre st., N. Y.
Moore, H. C., Fort Scott, Kan.
Morton Lumber Co., 242 S. Water st. (Room 16), Chicago, Ill.
Murry, M. & Co., 67 Alvord st., Indianapolis, Ind.
Nashville Lumber Co., Nashville, Tenn.
N. Y. Hardwood Lumber Co., 200 Broadway, N. Y.
Nicola Bros., 516 Market st., Pittsburgh, Pa.
North & Ewart Lumber Co., Kansas City, Mo.
Osborne & Clarke, 245 Hennepin av., Minneapolis, Minn.
Parkhurst & Wilkinson, 148 E. Kinzie st., Chicago, Ill.
Parsons, H. H., 82 Griswold st., Detroit, Mich.
Peck, J. C. & Son, 40 Collins st., Atlanta, Ga.
Piper & Hamilton, 447 W. Main st., Louisville, Ky.
Price, Welch & Co., Canton av. and President st., Balt., Md.
Rathborne, Joseph & Co., ft. Randolph st., Chicago, Ill.
Rayner, J., 283-289 E. 20th st., Chicago, Ill.
Reamer, J. M., 38 Park Row, N. Y.
Rogers & Baldwin, 235 Cherry st., Chicago, Ill.
SCHADA, A. F., 430 WALNUT ST., PHILADELPHIA, PA.
Schnelle & Querl Lumber Co., 4005 N. Main st., St. Louis, Mo.
Scranton, J. P. Lumber Co., 1250 2d av., Detroit, Mich.
Shank, I. L. & Co., Rowlesburg, W. Va.
Sierks Bros. & Co., 89 E. Randolph st. (Room 29), Chicago, Ill.
Smith, J., Willard, 157-159 S. Canal st., Chicago, Ill.
Smith, Moses, Coldwater, Mich.
Smith & Armstrong, 136 W. Polk st., Chicago, Ill.
St. Louis Refrigerator and Wooden Gutter Co., St. Louis, Mo.
Stocksdale, J. P., 78 Wall st., N. Y.
Stone, R. B., Lumber Co., Com'l Nat. Bank Bldg., Chicago, Ill.
Strack & Angell, Fort Wayne, Ind.
Strickland, F. P. & Co., Sheidley Bldg., Kansas City, Mo. **23**
Streight, John, 131 N. Market st., Nashville, Tenn.
Sutherland, Wm. W., 4 Hoyt Block, E. Saginaw, Mich.
Taylor & Harrington, 284 S. Water st., Chicago, Ill.
Tennessee Lumber Co., Cincinnati, O.
Theworgy, W. H. & Co., 30 Kilby st., Boston, Mass.
Uptegrove, William E. & Bro., ft. E. 10th st., N. Y.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Vinnedge Bros., Division and N. Branch st., Chicago, Ill.
Wallace, John H., 242 S. Water st. (Room 8), Chicago, Ill.
Walling, E. P., 73 Wall st., N. Y.
Washburn, E. & Son, 171 W. Kinzie st., Chicago, Ill.
Wellman, Hall & Co., 71 Kilby st., Boston, Mass.
Wells, R. A. & Bro., 277 E. 22d st., Chicago, Ill.

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Westervelt & Dennis, 444 Franklin st., Detroit, Mich.
West Wisconsin Mfg. Co., Wilson, Wis.
Wheeler, W. E., Toledo, O.
White, Geo. E. & Co., 406 Lake st., Chicago, Ill.
White, Samuel F., 2425 Water st., Chicago, Ill.
White Bros., 13 Main st., San Francisco, Cal.
Wicker, A. A., 19 Doane st., Boston, Mass.
Wilce, T. & Co., 22d & Throop sts., Chicago, Ill.
Williams, Jr., Thos. & Co., 18th and Bainbridge sts., Phila., Pa.
Wood, A. M., 51-53 Beverly st., Boston, Mass.
Woodruff Lumber Co., Memphis, Tenn.
Woods, John M. & Co., 70-72 Canal st., Boston, Mass.

Lumber—Hardwood Interior Finishing.

Curtis Bros. & Co., Clinton, Ia.
Disbrow, M. A. & Co., Omaha, Neb.
Farley & Loetscher Mfg. Co., Dubuque, Ia.
Meyer, C. J. L. Sons Co., North Pier, Chicago, Ill.

Lumber—Redwood.

Allen, E. L., 4 California st., San Francisco, Cal.
Cottoneva Lumber Co., 4 California st., San Francisco, Cal.
Chicago Lumber Co., 35th and Iron sts., Chicago, Ill.
Culver, E. W. Lumber Co., 623 E. 18th st., Kansas City, Mo.
Eastern Lumber Co., Tonawanda, N. Y.
Excelsior Redwood Co., Humboldt Bay, Cal.
Fort Bragg Redwood Lumber Co., 42 Market st., San Francisco, Cal.
Hanson & Co., Pier 11, Stewart st., San Francisco, Cal.
Hatch & Keith, Canalport av. and 21st st., Chicago, Ill.
San Pedro Lumber Co., San Pedro, Cal.

Lumber—Ship.

East Saginaw and Averill Lumber Co., East Saginaw, Mich.
Jackson Lumber Co., Lockport, N. Y. **21**.

Lumber—White Pine—Wholesale.

Bacon & Pike, 126 Front st., N. Y.
Baird, Boyd & Co., Nashville, Tenn.
Bartman, John, Campbell st. and Broadway, Louisville, Ky.
Burton, E. P. & Co., 921 N. Delaware av., Phila., Pa.
Caryl, A. H. & Co., Kansas City, Mo.
Cutler & Savidge Lumber Co., Detroit, Mich.
Danner, A. C., Mobile, Ala. **69**.
Delta Lumber Co., 44 Moffat Blk., Detroit, Mich.
Dodge, Arthur M., Jersey City, N. J.
Dunbar, M. P. Co. (The), 18 Broadway, N. Y.
Eastern Lumber Co., Tonawanda, N. Y.
English, Watkins & Fuller, Throop and 22d sts. Chicago, Ill.
Hanson & Co., Pier 11, Stewart st., San Francisco, Cal.
Jackson Lumber Co., Lockport, N. Y. **21**.
Kaw Valley Lumber Co., 9th st. and Broadway, Kansas City, Mo. **16**.
Lawrence & Pollard, 16 Central st., Boston, Mass.
Lloyd, Wm. M. Co. (Ltd.), 29th st. and Ridge av., Phila., Pa.
McDonald Lumber Co., Kansas City, Mo.
Nelson, Tenney & Co., 334 Hennepin av., Minneapolis, Minn.
Porter, Frank & Co., 242 S. Water st., Chicago, Ill.
Rathborne, Joseph & Co., ft. Randolph st., Chicago, Ill.
Rice & Lockwood Lumber Co., Springfield, Mass.
Riley, Chas. S. & Co., 1st wharf bl. Green st., Phila., Pa.
Sawyer-Goodman Co., 500 Lumber st., Chicago, Ill.
Schnelle & Querl Lumber Co., 4005 N. Main st., St. Louis, Mo.
Shank, I. L. & Co., Rowlesburg, W. Va.
Shoemaker, Walter & Co., 45 W. North av., Chicago, Ill.
Spry Lumber Co., Chicago, Ill.
Stocksdale, J. P., 78 Wall st., N. Y.
Strickland, F. P., & Co., Sheidley Bldg., Kansas City, Mo. **23**.
Taylor & Betts, 42 N. Wharf st., Phila., Pa.
Tonawanda Lumber Co., Tonawanda, N. Y.
Walling, E. P., 72 Wall st., N. Y.
Wellman, Hall & Co., 71 Kilby st., Boston, Mass.
Wells & Vyn Schaick Co., 165 Randolph st., Chicago, Ill.
Whitney & Tracy, 22 Erie st., Toledo, O.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65**.
Van Utassy, A. W., Phila., Pa.
Youmans Bros. & Hodgkins, Winona, Minn.

Lumber—Wholesale.

Adams-Harr Co., 210 Lumber Ex., Minneapolis, Minn.
Appleton, H. E., 967 Liberty av., Pittsb'gh, Pa.
Arthurs Coal & Lumber Co. (The), 95 5th av, Pittsburgh, Pa.
Atlanta Lumber Co., Atlanta, Ga.
Aviles Bros., 123 Front st., N. Y.
Backus, E. W., & Co., 305 Lumber Ex., Minneapolis, Minn.
Bacon & Pike, 126 Front st., N. Y.
Baird, Boyd & Co., Nashville, Tenn.
Baldwin, R. J., & Co., Montgomery, Ala.
Barker, S. B., & Co., Chicago, Ill.
Barnett, S. R., 91 5th av., Pittsb'gh, Pa.
Barrett, Geo., & Co., Camden, N. J.
Bartman, John, Campbell st. and B'way, Louisville, Ky.
Bassett, J. B., & Co., 3 Lumber Ex., Minneapolis, Minn.
Bates, J. E., & Co., Nashville, Tenn.
Bayard, Henry, & Co., 2900 N. Broad st., Phila., Pa.
Beaumont Lumber Co., Beaumont, Tex.
Berwick, C., & Co., Hazlehurst, Ga.
Bigelow, A. A., & Co., Washburn, Wis.
Blacksher Bros. & Miller, Brewton, Ala.
Bliss, G. W. & W. H., Nashville, Tenn.
Boggs Bros., Cheyboygan, Mich.
Bohn, Mfg. Co., 6th & Wacouta sts., St. Paul, Minn.
Bovee, Toy & Co., 19 Montgomery st., San Francisco, Cal.
Boyle, L. V., & Co., Obion, Tenn.
Boynton's Sons, 32 B'way, N. Y.
Bradley-Ramsey Lumber Co., Lake Charles, La.
Brister, B. E. & Co., Bogue Chitto, Miss.
Brookhaven Lumber & Mfg. Co, Brookhaven, Miss.
Brooklyn Mill & Lumber Co., Atlantic & Schenectady aves., B'klyn, N. Y.
Bucki, L. & Son, Ellaville, Fla.
Burton, E. P. & Co., 921 N. Delaware av., Phila., Pa.
Burton Lumber Co., Baton Rouge, La.
Camp & Hinton Bros., Lumberton, Miss.
Carney, James A., Carney, Ala.
Carney, W. M., Williams, Ala.
Caryl, A. H. & Co., 18th and Bell sts., Kansas City, Mo.
Case, W. V., Lumber Co. (Ltd.), 407 Walnut st., Phila., Pa.
Chamberlin, W. C., Brookhaven, Miss.
Chamberlin & Bickford, 54 Kilby st., Boston, Mass.
Charnley & Lovdall, ft. N. Carpenter st., Chicago, Ill.
Chellborg, C. F., 19 B'way, N. Y.

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Chicago Lumber Co., 35th and Iron sts., Chicago, Ill.
Chopin Lumber Co., Chopin, La.
Clarke, N. P. & Co., 102 Lumber Ex., Minneapolis, Minn.
Clough, Bros., Nicollet av., Minneapolis, Minn.
Conard, Calvin, Phila., Pa.
Cooling, Henry S., B'way and 12th st., Louisville, Ky.
Cote, Geo. M., 91 5th av., Pittsburgh, Pa.
Crane & Clark, 30th st., N. R., N. Y.
Crosby, C. P., La Crosse, Wis.
Cross, Gordon & Randall Lumber Co., E. Saginaw, Mich.
Crum Bros., 1012 Penn av., Pittsburgh, Pa.
Culver, E. W., Lumber Co., Kansas City, Mo.
Currier, R. B., Springfield, Mass.
Curtis Bros. & Co., Clinton, Ia.
Cutler & Savidge Lumber Co., Detroit, Mich.
Cypress Shingle & Lumber Co., Plaquemine, La.
Danner, A. C., Mobile, Ala. **69.**
Dantzler, L. N., Lumber Co., Moss Point, Miss.
Davenport, Peters & Co., 70 Kilby st., Boston, Mass.
De Camp & Willson, 88 Cortlandt st., N. Y.
Decker, A. T. & Co., ft. Bethune st., N. Y.
Delta Lumber Co., 44 Moffat Blk., Detroit, Mich.
Desha Lumber and Planting Co., 60 Congress st., Boston, Mass.
Dessert, Joseph & Co., Mosinee, Wis.
Dietz, C. N., Omaha, Neb.
Disbrow, M. A. & Co., Omaha, Neb.
Dodge, Arthur M., Jersey City, N. J.; 18 Cortlandt st., N. Y.
Dodge, Meigs & Co., 72 Wall st., N. Y.
Dunbar M. P. Co. (The), 18 Broadway, N. Y
Dunham, C. A., Kansas City, Mo.
Dunham Lumber Co., Dunham, Ala.
Dwight, Wm. M. & Co., Detroit, Mich.
Eastern Lumber Co., Tonawanda, N. Y.
Eastman, Bovey & Co., Minneapolis, Minn.
Eastman Bros. & Co., 11 Central st., Boston, Mass.
East Saginaw and Averill Lumber Co., East Saginaw, Mich.
East Texas Lumber Mills, Texarkana, Ark
Eldred, Anson & Son, Green Bay, Wis.
Empire Lumber Co., Chattanooga, Tenn.
English, Watkins & Fuller, Throop and 22d sts., Chicago, Ill.
Este, Chas., 17th and Callowhill sts., Phila., Pa.
Farley & Loetscher Mfg. Co., Dubuque, Ia.
Ferguson H. C., Stillwater, Minn.
Fisher, A. F. & Co., Laflin, s. 22d st., Chicago, Ill.
Fisher, J. S., 91 5th av., Pittsburgh, Pa.
Flowers & Peagler, Greenville, Ala.
Ford & Godfrey, 21 Exchange pl., Boston, Mass.
Fremont & Ryan, Atlanta, Ga.
Frierson & Co., 70 Bay st., Savannah, Ga.
Fuller, R. G. & Co., Ullman and 38th sts., Chicago, Ill,
Ganahl, John J., Lumber Co., 24th & Park st., St. Louis, Mo.
Garrison & Hetzel, 1012 Penn av., Pittsb'gh, Pa.
Gauger, John A. & Co., 22d and Laflin sts., Chicago, Ill.,
Gay Mfg. Co., Suffolk, Va.
Gerhart Bros. & Koehler, Jackson st. and Broadway, Louisville, Ky.
Gebhard & Estabrook, East Saginaw, Mich.
Gilmer, A., Orange, Tex.
Glenwood Mfg. Co., Glenwood, Wis.
Gillespie, C. J., 710 Duquesne way, Pittsburgh, Pa.
Goldberg & Rich, Nashville, Tenn.
Goldsboro Lumber Co., Goldsboro, N. C.
Goodman, Wright & Foster, Cincinnati, O.
Goodyear, D. A. & C. A., Tomah, Wis.
Gordon, Jas. R. & Co., 1900 Cory st., Richmond, Va.
Graham, John R., Jr., c. 11th av. and 30th st., N. Y.
Greenleaf, Johnson & Co., Norfolk, Va.
Gribben, J. P., 194 E. 7th st., St. Paul, Minn.; 207 Lumber Ex., Minneapolis, Minn.
Guenther, E., 1722 Washington av., Phila., Pa.
Hagan, W. C. & Co., 91 5th av., Pittsburgh, Pa.
Hamilton & Merryman Co., Loomis and 22d sts., Chicago, Ill.
Hammond, Edward J. & Co., 55 Kilby st., Boston, Mass.
Hall & Ducey Lumber Co., ft. 4th av., N., Minneapolis, Minn.
Hanson & Co., Pier 11, Stewart st., San Francisco, Cal.
Harvey, T. W., Lumber Co., Omaha, Neb.
Hatch & Keith, Canalport av. and 21st st, Chicago, Ill.
Hayden Bros., Jefferson and 22d sts., Chicago, Ill.
Head & Dowst, Manchester, N. H.
Herrick, E. M., 17 Stewart st., San Francisco, Cal.
Hieronymus Bros., Theodore, Ala.
Hill, Hosmer & Co., 205 Lumber Ex., Minneapolis, Minn.
Hilton Timber and Lumber Co., 81 New st., N. Y.
Himmelburger, I. & Co., Buffington, Mo.
Hintze & Weise, 21st and Brown sts., Chicago, Ill.
Hitch, Frank, Hamilton, N. C.
Hoagland, Geo. A., Omaha, Neb.
Hoefer, H. & Co., Dayton, O.
Holbrook Hardwood Lumber and Timber Co., Grove and 18th sts., Chicago, Ill.
Hollister Bros., Tonawanda, N. Y.
Hope Lumber Co., Hope, Ark.
Horton, C. G., 101 W. 14th st., N. Y.
Hubbard Bros., Mobile, Ala.
Humphrey, R., 543 Smithfield st., Pittsburgh, Pa.
Hunter, Tillotson & Co., Muskegon, Mich.
Indiana Lumber Co., Nashville, Tenn.
Jackson, E. E. & Co., Whaleyville, Pa.
Jackson Lumber Co., Lockport, N. Y. **21.**
John Spry Lumber Co., Chicago, Ill.
Johnson & Wimsatt, ft. 18th st., S. W., Washington, D. C.
Johnstown Lumber Co., 363 Bedford st., Johnstown, Pa.
Judd & Cross, East Saginaw, Mich.
Junk Bros. & Co., Nashville, Tenn.
Kaw Valley Lumber Co., 9th st. and B'way, Kansas City, Mo. **16.**
Kelsey, L. A. & Co., Tonawanda, N. Y.
Keystone Lumber Co., Bogue Chitto, Miss.
Krouse & Hawkins, 1430 S. Penn sq., Phila., Pa.
Kugler, Geo. W. & Son, Washington, N. C.
Laird-Norton Co., Winona, Minn.
Lawrence & Pollard, 16 Central st., Boston, Mass.
Laycock Lumber Co., Buffalo, N. Y.
Lazarus, Joshua, 708 Penn av., Pittsburgh, Pa.
Leet, Chas. B. & Co., 18 Broadway, N. Y.
Le Kies & Collins, Norfolk, Va.
Lieberman, Loveman & O'Brien, Nashville, Tenn.
Litch, Thos. K. & Sons, 42½ 6th st., Pittsburgh, Pa.
Litchfield Lumber Co., 71 Kilby st., Boston, Mass.
Little Kanawha Lumber Co., Parkersburg, W. Va.
Lloyd, Wm. M. Co. (Ltd.), 29th st. and Ridge av., Phila., Pa.
Loch & Moore, Bryant P. O., Calcasieu Par., La.
Lowrey, Robert C. & Co., 6 State st., N. Y.
Lutcher & Moore, Orange, Tex. **51.**
Ludington, N., Lumber Co., 250 W. 22d st., Chicago, Ill.
Ludington, Wells & Van Schaick Co., 165 Randolph st., Chicago, Ill.
Lutcher & Moore, Orange, Tex. **51.**
McAnbley, C. F. & Co., Bradford, Pa.
McClave, D. W., Hunter's Point, L. I., N. Y.
McMillen, R. & Co., Oshkosh, Wis.

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McQuesten, Geo. & Co., 27 Kilby st., Boston, Mass.
Maley, Threlkeld & Co., 104 Water st., Boston, Mass.
Malvern Lumber Co., Malvern, Ark.
Mann Bros., 8 Wabash av., Chicago, Ill.
Marbury & Jones, Bozeman, Ala.
Martin, John, Lumber Co., 116 W. 7th st., St. Paul, Minn.
Martin & Barriss, 130 Central way, Cleveland, O. **51.**
Mason, Jno. S. & Co., W. 26th st., c. 11th av., N. Y.
Mengel, C. C., Jr., & Bro., Louisville, Ky.
Mershon, Wm. B., E. Saginaw, Mich. **67.**
Methudy & Meyer, Main and Chambers sts., St. Louis, Mo.
Metz, W. H. & Co., 14th and Lexington sts., Louisville, Ky. **58.**
Meyer, C. J. L. & Sons Co., North Pier, Chicago, Ill.
Michigan Lumber Co., Ashland av. and 22d st., Chicago, Ill.
Millener, E. P., 215 Main st., Buffalo, N. Y.
Millener, Joel H., 220 Main st., Buffalo, N. Y.
Milner, Caldwell & Flowers, Bolling, Ala.
Mitchell & Rowland Lumber Co. (The), Toledo, Ohio.
Moore, H. C., Fort Scott, Kan.
Morton & Backus, 1100 Woodbridge st., W., Detroit, Mich.
Moss, T. J., Bank of Commerce Bldg., St. Louis, Mo, **55.**
Musser Lumber Co., Muscatine, Ia.
Nashville Lumber Co., Nashville, Tenn.
Nease, H. B. & Son, 106 3d av., Pittsburgh, Pa.
Nelle & Pratt, Minneapolis, Minn.
Nelmeyer, A. J., Lumber Co., St. Louis, Mo.
Nelson, C. N., Lumber Co., 18 Gilfillan Block, St. Paul, Minn.
Nelson, Tenny & Co., 334 Hennepin av., Minneapolis, Minn.
Nicola Bros., 516 Market st., Pittsburgh, Pa.
Noble, John H., 106 3d av., Pittsburgh, Pa.
Northern Mill Co., 805 Lumber Ex., Minneapolis, Minn.
Northwestern Lumber Co., Eau Claire, Wis.
North Wisconsin Lumber Co., Hayward, Wis.
North & Ewart Lumber Co., 119 W. 8th st., Kansas City, Mo.
Norton, C. E., Dry Run, Ark.
Norwood & Butterfield Co., 385 Illinois st., Chicago, Ill.
Omslaer, Jas., 311 River st., Allegheny, Pa.
Osborne & Clark, 245 Hennepin av., Minneapolis, Minn.
Osterhout & Fox, Grand Rapids, Mich.
Osterhout & Fox Lumber Co., 91 5th av., Pittsburgh, Pa.
Packer, E. L., 603 Wood st., Pittsburgh, Pa.
Packer, J. P., 971 Liberty av., Pittsburgh, Pa.
Paine & Kaurup, 64 1st av., Milwaukee, Wis.
Palmer, Fuller & Co., Union and W. 22d sts., Chicago, Ill.
Patton & Co., Albany, N. Y.
Pearson, J. H. & Co., Laurel and 39th sts., Chicago, Ill.
Peck, J. C. & Son, 40 Collins st., Atlanta, Ga.
Penna. and West, Va. Lumber Co., 95 5th av., Pittsburgh, Pa.
Peters Lumber Co., Brewton, Ala.
Piedmont Lumber Co., 40 Marietta st., Atlanta, Ga.
Pittsburgh & Kanawha Lumber Co., 91 5th av., Pittsburgh, Pa.
Pharr & Williams, Pattersonville, La.
Piper & Hamilton, 447 W. Main st., Louisville, Ky.
Plaquemine Lumber and Shingle Co., Plaquemine, La.
Poitevent & Favre, Pearlington, Miss.
Porter, Frank & Co., 242 Water st., Chicago, Ill.
Post, J. K. & Co., Oswego, N. Y.
Potter, Birdsall & Co., 7 Carter st., Cleveland, Ohio.
Prescott Lumber Co., Prescott, Ark.
Prewitt, Spurr & Co., Nashville, Tenn.
Price, Welch & Co., Canton av., and President st., Baltimore Md.
Priebatsch, Max, Brookhaven, Miss.
Radford Bros. & Co., Oshkosh, Wis.
Raiguel, W. H. & Co., Grand Rapids, Mich.
Rathborne, Joseph & Co., ft. Randolph st., Chicago, Ill.
R. B. Stone Lumber Co., 175 Dearborn st., Chicago, Ill.
Reamer, J. M., 88 Park Row, N. Y.
Reed & Sherwood, Division Blk., St. Paul, Minn.
Reliance Lumber Co., Beaumont, Tex.
Rice Lake Lumber Co., Rice Lake, Wis.
Rice & Lockwood Lumber Co., Springfield, Mass.
Riley, Chas. S. & Co., 1st wharf bl. Green st., Phila., Pa.
Roanoke Railroad and Lumber Co., Norfolk, Va.
Robinson, G. W., Mobile, Ala.
Robinson & Booth, 91 Wall st., N. Y.
Rocky Creek Lumber Co., Chapman, Ala.
Rogers, D. W. & Co., Renfroe, Ala.
Roper, J. L. Lumber Co., Norfolk, Va.
Roseboom, W. L. & Co., Alba, Mich.
Ross, Bradley & Co., Bay City, Mich,
Rust-Owen Lumber Co., Eau Claire, Wis.
Ryan, Leon I., Atlanta, Ga.
Ryland & Brooks, 56 W. Falls av., Balt., Md.
San Pedro Lumber Co., San Pedro, Cal.
Sawyer-Goodman Co., 500 Lumber st., Chicago, Ill.
Sawyer Lumber Co., Tonawanda, N. Y.
SCHADA, A. F., 430 WALNUT ST., PHILA., PA.
Schnelle & Querl Lumber Co., 4005 N. Main st., St. Louis, Mo.
Schulenburg & Boeckeler Lumber Co., St. Louis, Mo.
Seaboard Mfg. Co., Mobile, Ala.
Shank, J. L., & Co., Rowlesburg, W. Va.
Shoemaker, Walter & Co., 45 W. North av., Chicago, Ill.
Short, E. M., Washington, N. C.
Simpson & Co., Blackwater, Fla.
Smith, C. A., & Co., 302 Lumber Ex., Minneapolis, Minn.
Smith, Fassett & Co., Tonawanda, N. Y.
Smith & Blanchard, 75 State st., Boston, Mass.
Smith & Marbury, Bozeman, Ala.
Snee, John A., 419 Smithfield st., Pittsb'gh, Pa.
Soper Lumber Co., 22d & Loomis sts., Chicago, Ill.
South Branch Lumber Co., ft. Fisk st., Chicago, Ill.
Southwest Lumber Co., Wausau, Wis.
South Missouri Land Co., Willow Springs, Mo.
Southwest Lumber Co., Kansas City, Mo.
Spry Lumber Co., Chicago, Ill.
St. Louis Refrigerator & Wooden Gutter Co., St. Louis, Mo.
Steele, A. B., Atlanta, Ga.
Stockdale, J. P., 78 Wall st., N. Y.
Stone, R. B., Lumber Co., Com'l Nat. Bank Bldg., Chicago, Ill.
Streight, John, 131 N. Market st., Nashville, Tenn.
Strickland, F. P., & Co., Sheidley Bldg., Kansas City, Mo. **23.**
Stupy, T., 543 Smithfield st., Pittsb'gh, Pa.
Surry Lumber Co., Baltimore, Md.
Sutherland, Wm. W., 4 Hoyt Blk., E. Saginaw, Mich.
Taylor & Betts, 42 N. Wharf, Phila., Pa.
Thayer Lumber Co., Muskegon, Mich.
Theworgy, W. H. & Co., 30 Kilby st., Boston, Mass.
Thompson, W. H. & Co., 93 4th av., Pittsburgh, Pa
Thornton, H. H., Pensacola, Fla.
Ten Eyck, C. & E., East Saginaw, Mich.
Tennessee Lumber Co., Cincinnati, O.
Texas Tram and Lumber Co., Beaumont, Texas.
Tilley, Edward M., Berkley, Va.
Tonawanda Lumber Co., Tonawanda, N. Y.
Torrent & Co., Muskegon, Mich.
Treworgy, W. H. & Co., 30 Kilby st., Boston, Mass.

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Tucker, J. C., Jr., Narragansett Pier, R. I.
Tunis Lumber Co., 6 South st., Balt., Md.
Tunis and Serpell Lumber Co., Norfolk, Va.
Underhill & Co., 15 Park Row, N. Y.
Vance, E. J. & Co., Bay City, Mich.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Vinnedge Bros., Division and N. Branch sts., Chicago, Ill.
Von Utassy, A. W., ft. Delaware av., Phila., Pa.
Wadsworth, W. W., Wadsworth, Ala.
Wakefield, John A., Omaha, Neb.
Washburn Mill Co, 40 Washington av., Minneapolis, Minn.
Watson, W. G. & Co., Muskegon, Mich.
Wells, R. A. & Bro., Clark and 22d sts., Chicago, Ill.
Wells & Van Schaick Co., 165 Randolph st., Chicago, Ill.
Wellman, Hall & Co., 71 Kilby st., Boston, Mass.
Westervelt & Dennis, 444 Franklin st., Detroit, Mich.
West Wisconsin Mfg. Co., Wilson, Wis.
White, Geo. E. & Co., 406 W. Lake st., Chicago, Ill.
White, J. J., McComb City, Miss.
White, Samuel F., 2425 Water st., Chicago, Ill.
White Bros., 18 Main st., San Francisco, Cal.
Whitney & Tracy, 22 Erie st., Toledo, O.
Wilbert's, A., Sons, Lumber and Shingle Co., Plaquemine, La.
Wicker, A. A., 19 Doane st., Boston, Mass.
Wilce, T. & Co., 22d and Throop sts, Chicago, Ill.
Williams, Thos., Jr., & Co., 18th and Bainbridge sts., Phila., Pa,
Williams & Blume, Nashville, Tenn.
Williams & Co., Memphis, Tenn.
Wingate, D. R., Orange, Tex.
Winona Lumber Co., Winona, Minn.
Woodruff Lumber Co,, Memphis, Tenn.
Woods, Jenks & Co., 5 Carter st., Cleveland, O. **47.**
Woodworth, H, P., Marietta, O.
Wright, A. W., Lumber Co., Saginaw, Mich.
Wyatt, German D., Omaha, Neb.
Youmans, T. J. & Co., Hazlehurst, Pa.
Youmans Bros. & Hodgkins, Winona, Minn.

Lumber—Yellow Pine—Wholesale.

Adams, Edwin W. & Co., 114 Wall st,, N. Y.
Atlanta Lumber Co., Atlanta, Ga.
Baldwin, J. R. & Co., Montgomery, Ala.
Bayard, Henry & Co., 2900 N. Broad st., Phila., Pa.
BEAUMONT LUMBER CO., BEAUMONT, TEX.
Berwick, C. & Co., Hazlehurst, Ga.
Blacksher Bros. & Miller, Brewton, Ala.
Bradley - Ramsey Lumber Co., Montgomery, Ala.
Brister, B. E. & Co., Bogue Chitto, Miss.
Blades, Wm. B. & Bro., New Berne, N. C.
Boynton Sons, 22 Broadway, N. Y.
Brookhaven Lumber and Mfg. Co., Brookhaven, Miss.
Burton, E. P. & Co., 921 N. Delaware av., Phila., Pa.
Camp & Hinton Bros., Lumberton, Miss.
Carney, James A., Carney, Ala.
Caryl, A. H. & Co., 18th and Bell sts., Kansas City, Mo.
Chamberlin, W. C., Brookhaven, Miss.
Chicago Lumber Co., 35th and Iron sts., Chicago, Ill.
Currier, R. B., Springfield, Mass.
Cutler & Savidge Lumber Co., Detroit, Mich.
Danner, A. C., Mobile, Ala. **69.**
Dantzler, L. N. Lumber Co., Moss Point, Miss.
Davenport, Peters & Co., 70 Kilby st., Boston, Mass.
DeCamp & Wilson, 88 Cortlandt st., N. Y.
Decker, A. T. & Co., ft. Bethune st., N. R., N. Y.; 35 Broadway, N. Y.
Dodge, Meigs & Co., 72 Wall st., N. Y.
Dunham Lumber Co., Dunham, Ala.
East Texas Lumber Mills, Texarkana, Ark.
Eppinger & Russell, 160 Water st., N. Y.
Flowers & Peagler, Greenville, Ala.
Fremont & Ryan, Atlanta, Ga.
Frierson & Co., 70 Bay st., Savannah, Ga.
Gilmer, Alexander, Orange, Tex.
Goodman, Wright & Foster, Cincinnati, O.
Hammond, Edw. J. & Co., 55 Kilby st., Boston, Mass.
Hatch & Keith, Canalport av. and 21st st., Chicago, Ill.
Hilton Timber and Lumber Co., 81 New st., N.Y.
Hoagland, Geo. A., Omaha, Neb.
Hope Lumber Co., Hope, Ark.
Indiana Lumber Co., Nashville, Tenn.
Johnson & Wimsatt, ft. 13th st., S. W., Washington, D. C.
Kaw Valley Lumber Co., 9th st. and Broadway, Kansas City, Mo. **16.**
Keystone Lumber Co., Bogue Chitto, Miss.
Kugler, Geo. W. & Son., Washington, N. C.
Lloyd, Wm. M. Co. (Ltd.), 29th st. and Ridge av., Phila., Pa.
Lock & Moore, Bryant P. O., Calcasieu Par., La.
Lowry, Robert C. & Co., 6 State st., N. Y.
Lutcher & Moore, Orange, Tex. **51.**
McClave, D. W., Hunter's Point, L. I., N. Y.
Mann Bros., 8 Wabash av, Chicago, Ill.
Marbury & Jones, Bozeman, Ala.
Martin, John, Lumber Co., 116 W. 7th st., St. Paul, Minn.
Maybury & Jones, Bozeman, Ala.
Mengel, C. C., Jr., & Bro., Louisville, Ky.
Millen, L. R. & Co, 16 Beaver st., N. Y.
Milner, Caldwell & Flowers Lumber Co., Bolling, Ala.
Nashville Lumber Co., Nashville, Tenn.
Neimeyer, A. J., Lumber Co., St. Louis, Mo.
Nona Mills Co., Nona, Tex.
North & Ewart Lumber Co., 119 W. 8th st., Kansas City, Mo.
Norwood & Butterfield Co., 385 Illinois st., Chicago, Ill.
Piedmont Lumber Co., 40 Marietta st., Atlanta, Ga.
Prescott Lumber Co., Prescott, Ark.
Priebatsch, Max, Brookhaven, Miss.
Rathborne, Joseph & Co., ft. Randolph st., Chicago, Ill.
Reliance Lumber Co., Beaumont, Tex.
Robinson & Booth, 91 Wall st., N. Y.
Rogers, D. W. & Co., Renfroe, Ala.
Ryan, Leon I., Atlanta, Ga.
Schnelle & Querl Lumber Co., 4005 N. Main st., St. Louis, Mo.
Schulenburg & Boeckeler Lumber Co., St. Louis, Mo.
Shank, I. L. & Co., Rowlesburgh, W. Va.
South Missouri Land Co., Willow Springs, Mo.
St. Louis Refrigerator & Wooden Gutter Co., St. Louis, Mo.
Stoner & McClure, Pittsb'gh, Pa.
Strickland, F. P., & Co., Kansas City, Mo. **23.**
Taylor & Betts, 42 N. Wharf st., Phila., Pa.
Texas Tram & Lumber Co., Beaumont, Tex.
Thornton, H. H., Pensacola, Fla.
Tilley, Edward M., Berkley, Va.
Treworgy, W. H., & Co., 30 Kilby st., Boston, Mass.
Tunis, E. L., & Co., Balt., Md.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Van Utassy, A. W., Phila., Pa.
Wadsworth, W. W., Wadsworth, Ala.
Walling, E. P., 72 Wall st., N. Y.
Wellman, Hall & Co., 71 Kilby st., Boston, Mass.
Wheelwright, Wm. D., & Co., 82 Wall st., N. Y.
White, J. J., McComb City, Miss.
Wingate, D. R., Orange, Tex.
Woodruff Lumber Co., Memphis, Tenn.
Youmans Bros. & Hodgins, Winona, Minn.
Youmans, T. J., & Co., Hazlehurst, Ga.

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Machinery—Automatic.

Adt, John & Son, State, st., c. Mill R., New Haven, Conn.
Hatch Bros. Co.,(The) State st., c. Main, Bridgeport, Conn.
Manville, E. J., Waterbury, Conn.
Peacock, Elijah P., 143-145 S. Clint'n st., Chicago, Ill.
Smith, Israel H., 34 Southbridge, Worcester, M.

Machinery—Blast Furnace.

Shenango Machine Co., Sharon, Pa.
Taws & Hartman, 1233 N. Front st., Phila., Pa.

Machinery—Bolt and Nut.

Acme Machinery Co., Cleveland, O.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Boynton & Plummer, 52 La Grange st., Worcester, M.
Cook & Co., 22 Cortlandt st., N. Y.
Fisher Engine Foundry & Machine Works, 23d, 24th and Smallman, Pitt'g., Pa.
Forsaith, S. C., Machine Co., Manchester, N. H.
Garvin, E. E. & Co., 139-143 Centre st., N.Y.
Howard Bros., Fredonia, N. Y.
Howard Iron Works, Buffalo, N. Y.
Link-Belt Machinery Co., 11-23 S. Jefferson st., Chicago, Ill.
Manning, Thomas, Jr., & Co., Cleveland O.
Montross, R. W., Galien, Mich.
Nicholson & Waterman, Providence, R. I.
Niles Tool Works, Hamilton, O.
Pratt & Whitney Co., (The), Hartford, Conn.
Providence Steam Engine Co., Providence R. I.
Roberts, Chas. E., Chicago, Ill.
Wells Bros. & Co., Greenfield, M.
Winsted Foundry & Machinery Co., W. Winsted, Conn.

Machinery—Brass Working.

Hendey Machine Co., (The), Torrington, Conn.
Miller, Printz & Co., Reading, Pa.
Warner & Swasey, Cleveland, O.

Machinery—Brushing, Burnishing and Polishing.

Caldwell, Wilcox & Co., Newburg, N. Y
Curtis & Marble, Worcester, M.
Diamond Emery Wheel & Machine Co., Providence, R. I.
Globe Buffer Co., 25 Tremont st., Boston, M.
Parks & Woolson Machine Co., Springfield, M.
Tapley Machine Co., (The), 234 Devonshire st., Boston, M.
Tubbs & Humphreys, Cohoes, N. Y.
Watson & Stillman, 210 E. 43rd st., N. Y.

Machinery for Cable and Electric Railways.

Pond Engineering Co.,709 Marketst.,St.Louis,Mo.

Machinery—Carving.

Battle Creek Machinery Co.,Battle C'k, Mich. 17.

Machines—Car Wheel Boring.

Ajax Mfg. Co., Pitt'g., Pa.
Bates, Wilson & Co., 80 Chambers st., N. Y.
Battle Creek Machinery Co.,Battle C'k, Mich. 17.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Betts Machine Co., Wilmington, Del.
Brocket, C. A., & Co., 725 Del.st.,Kas. City,Mo. 69.
Bullock, M. C., Mfg. Co., 138 Jackson st., Chicago, Ill. 10–11.
Buss Machine Works, Grand Rapids, Mich. 58.
Colburn, L. S., Oberlin, O.
Colladay, Jos. O., & Bro., 626 Race st., Phila., Pa.
Eagan Co., (The), Cincinnati, O.
Enterprise Mfg. Co., Columbiana, O.
Fitchburg Machine Works, Fitchburg, M.
Garden City Fan Co., 50-58 W. Washington st., Chicago, Ill.
Garvin, E. E., & Co., 139-143 Centre st., N. Y.
Hubbard, H. N., 313 E. 22d st., N. Y.
Kellogg, Wm. P., Troy, N. Y.
McIvers Bros. & Co., Worcester, M.
Mahle Boring Machine Co., Cleveland, O.
Niles Tool Works, 96 Liberty st., N. Y., Phila., Pa., Chicago, Ill., Hamilton, O.
Pedrick & Ayer, 1025 Hamilton st.,Phila.,Pa. 60.
Phillips Mfg. Co., Pitt'g., Pa.
Power, L., & Co., 20 S. 23d st., Phila., Pa.
Sellers, Wm., & Co., Phila., Pa.
Star Tool Co., (The), Beverly, c. Mason st., Providence, R. I.
Stow Flexible Shaft Co.,(Ltd.), 2218 Penna. ave., Phila., Pa. 26.
Williams, White & Co., Moline, Ill.

Machinery—Centering.

Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Haskell, Warren & Co., 36 Charleston st., Boston, M.
Niles Tool Works, Hamilton, O.
Whiton, D. E., Machine Co.,(The), New London, Conn.

Machinery—Centrifugal.

Am. Tool & Machine Co.,(The), 84 Kingston st., Boston, M.
Dolph, A. M. Co., (The), 9th st. and Freeman ave., Cincinnati, O.

Machinery—Coal Handling & Washing.

Borden, Selleck & Co., 48 Lake st., Chicago, Ill.
Dickson Mfg Co., Scranton, Pa.
Eagle Iron Works, Terre Haute, Ind.
Elmes, Chas. F., Fulton st., c. Jefferson, Chicago, Ill.
Hunt & Co., C. W., 111 Broadway, N. Y.
Jeffrey Mfg. Co., (The), Columbus, O.
Keller, C. M., Columbus, Ind.
Ottumwa Iron Works, Ottumwa, Iowa.
Roller Chain Belting Co., Columbus, O.
Scaife Foundry & Machine Co., 28th, c. Smallman, Pitt'g., Pa.
Steubner & Woods, Hunters Point, N. Y.

Machinery—Driving.

Horace A. Keefer Co.,(The),Kansas City,Mo. 88.
Lane & Bodley Co.,(The), 257-283 Water st., Cincinnati, O.
Poole & Hunt, Baltimore, Md.

Machinery—Electric.

Acme Electric & Illuminating Co., 106 Liberty st., N. Y.
Arnoux & Hochhausen Electric Co.,26 Broadway, N. Y.
Brush Electric Light Co., (The), Cleveland, O.
Buffalo Electric Works, Buffalo, N. Y.
Bunnell, J. H., & Co., 106 Liberty st., N. Y.
Burnap, W. H., 259 W. 27th st., N. Y.
Colburn, J. W., & Co., Fitchburg, M.
Columbia Electric Mfg. Co., 30 Broad st., N. Y.
Eddy Electric Mfg. Co., (The), Hartford, Conn.
Ft. Wayne "Jenney" Electric Light Co., 87-89 Columbia st., Ft. Wayne, Ind.
Freeman, Warren P., Co., (The), 106-108 Liberty st., N. Y.
Galvano-Faradic Mfg. Co., 300 Fourth ave., N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Hecla Electric Light Co., 26½ E. 42d st., N. Y.
Jenney Electric Co., Indianapolis, Ind.
Markle Engineering Co., 133 Jefferson av., Detroit, Mich.
Mather Electric Co., (The), Hartford, Conn.
Meyer, Curt W., 357 Fourth av., N. Y.
Oneco Mfg. Co., New London, Conn.
Pittsburgh Electric Co., 213 Wood st., Pitt'g.,Pa.

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Schaefer Electric Mfg. Co., Boston, M.
U. S. Electric Lighting Co., (The), 59-61 Liberty st., N. Y.
Woonsocket Electric Machine & Power Co., Woonsocket, R. I.
Zucker & Levett Chemical Co., (The), 538-564 W. 16th st., N. Y.

Machinery—Foundry.

Detroit Foundry Equipment Co., Detroit, Mich.

Machinery—Gas.

Automatic Gas Machine Co., Newark, N. J.
Boston Gas Improvement Co., 17 State st., Boston, M
Bradley Gaslight Co., 61-63 N. Desplaines st., Chicago, Ill.
Buffalo Light, Heat & Power Co., Buffalo, N. Y.
Coleman Gas Machine Mfg. Co., 292 Main st., Cincinnati, O.
Combination Gas Machine Co., c.Lieb and Wight sts., Detroit, Mich.
Connelly, J. H., & Son, 33d & Smallman sts., Pitt'g., Pa.
Cosgrove & Dugett, 383-389 7th st., Jersey City, N. J.
Denny Bros. & Co., 34 Park Place, N. Y.
Fremont Gas Machine Co., Fremont, Neb.
Gilbert & Barker Mfg. Co., Springfield, M., 75 Maiden Lane, N. Y.
Goshen Safety Boiler Co., Goshen, N. Y.
Hainsworth, F., & Son, 168 Adams st., Chicago, Ill.
Imperial Mfg. Co., 212 Passaic av., Newark, N. J.
Isham, John G., & Co., 181 W. Pearl st., Cincinnati, O.
Kemp, C. M., 74 S. Charles st., Balt., Md.
McKay, Hugh, Mfg. Co., Titusville, Pa.
New England Gas Machine Co., (The), 24 Artisan st., New Haven, Conn.
Penna. Globe Gaslight Co., 47-49 N. 2d st., Phila., Pa.
Riznor Gas Machine Co., Mercer, Pa.
Seeger, Robert, 196 E. 7th st., St. Paul, Minn.
Star Mfg. Co., 19 Water st., Cincinnati, O.
Thermo Gas Carbonizer Co., 13 Duane st. Boston M.
Tirrill Co., 39 Dey st., N. Y.
Walworth Mfg. Co., 16 Oliver st., Boston, M.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.

Machinery—General.

Abbott & Thurber, Olean, N. Y.
Acme Machinery Co., Cleveland, O.
Allen Mfg. Co., (The), 55 S. Canal st., Chicago, Ill.
Allentown Rolling Mills, 287 S. 3d st., Phila., Pa.
American Tool & Machine Co., 84 Kingston st., Boston, M.
Ames Mfg. Co., 33 Pemberton sq., Boston, M. 64.
Atlantic Works, 76 Border st., Boston, M.
Baird, U. Machinery Co., 75 Water, st., Pitt'g. Pa.
Barnes, Chas. & Co., 38 Sycamore st., Cincinnati, O.
Barnes, W. F. & John, 571 Ruby st., Rockford, Ill. 49.
Bass Foundry & Machine Works, Ft. Wayne, Ind.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Benjamin & Co., 17 S. Canal st., Chicago, Ill.
Berry & Place Machine Co., 12 Californiast., San Francisco, Cal.
Betts, I. F., 509 Shipley st., Wilmington, Del.
Boston Blower Co., 276 Franklin st., Boston, M.
Bright, F. E., 835 Sheriff st., Cleveland, O.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Brown & Sharpe Mfg. Co., Providence, R. I.
Buss Machine Works, 48 S. Canal st., Chicago, Ill. 58.
Cadman, A. W., & Co., 63 Water st., Pitt'g., Pa.
Carlisle Mfg. Co., Carlisle, Pa. 50.
Central Iron Works, St. Louis, Mo.
Chambers Bros. & Co., 52d st., Phila., Pa.
Chandler & Farquhar, 177 Wash'n st., Boston, M.
Chicago Mortising Machine Co., 125 W. Washington st., Chicago, Ill.
Chubbuck, S. E., & Sons, 971 Tremont st., Boston,
Codd, W. C., 2010 Aliceanne st., Balt., Md.
Cole, J. Wendell, Chicago, Ill., and Columbus, O.
Deeley, Robt. & Co., ft. W. 52d st., N. Y.
Detroit Machine Screw Works, 68 Lafayette st., Detroit, Mich.
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Eaton, Thos. W., 64 W. Lake st., Chicago, Ill.
Electric & Machine Co., (The), 71 Sudbury st., Boston, M.
Farrel Foundry and Machine Co., (The), Ansonia, Conn.
Fay, J. A. & Co., 207-209 E. Lake st., Chicago, Ill., and 120 Broadway, N. Y.
Forsaith, S. C. & Co., Manchester, N. H.
Fraser & Chalmers, Chicago, Ill.
Fritz, Geo. J., 2018 S. Third, St. Louis, Mo.
Gait & Bumiller, 181 S. Clinton st., Chicago, Ill.
Gerlach, Peter & Co., Cleveland, O.
Globe Steam Heater Co., North Wales, Pa.
Goodell & Waters, 13 S. Canal st., Chicago, Ill.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Greenlee Bros. & Co., 229 W. 12th st., Chicago, Ill.
Gregory, H. P. & Co., Fremont and Mission, San Francisco, Cal.
Harmes, A. G., 92 1st av., Pitt'g., Pa.
Harrison Safety Boiler Works, 41 Dey st., N. Y., Phila., Pa.
Heartley, Geo. W., 293 St. Clair st., Toledo, O.
Hendrie & Bolthoff Mfg. Co., Denver, Col.
Hendy, Joshua, Machine Works, 39 Tremont st., San Francisco, Cal.
Hercules Iron Works, Canal and Carroll sts., Chicago, Ill.
Hewes & Phillips Iron Works, Newark, N. J.
Hill, Clark & Co., Boston, M.
Hodge, Samuel F. & Co., 320 Atwater st., Detroit, Mich.
Huyett & Smith Mfg. Co., Russel & D. G. H. & M. Ry., Detroit, Mich.
Kay Bros. & Co., 121 Water st., Pitt'g., Pa.
Kirkwood, A. J. & Co., 12 S. Canal, Chicago, Ill.
Lombard, Geo. R. & Co., Augusta, Ga.
McCormick, J. A. 150 1st av, Pitt'g., Pa.
McGill, Manchester & Co., (Ltd.), 2624 Smallman st., Pitt'g., Pa.
McNish, A. M. & Son, 516 Liberty av., Pitt'g., Pa.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Manning, Jr. Thos. & Co., 100 Merwin st., Cleveland, O.
Manville, E. J., Machine Co., Waterbury, Conn.
Michels', J., Machine Works, Fort & Beaubien, sts., Detroit, Mich.
N. Y. Central Iron Works, Geneva, N. Y.
Niles Tool Works, Hamilton, O.
Norton, D. K. & Son, Cincinnati, O.
Osborn, A. T. & Co., 113 Seneca st., Cleveland, O.
Pacific Iron Works, San Francisco, Cal.
Packard, O. L., Milwaukee, Wis.
Pancoast & Rogers, c. Gold & Platt sts., N. Y.
Pardee Car Works, Watertown, Pa.
Parke & Lacy, 8 California st., San Francisco, C.
Patton, R. H., 226 Chestnut st., Phila., Pa.
Peacock, Geo., Selma, Ala.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. 60.
Peoples, James A., 40 S. Canal st., Chicago, Ill.
Perkins Machinery Co., Atlanta, Ga.
Pitkins, A. B., Providence, R. I.
Pittsburgh Supply Co., (Ltd.), 105 Wood st., Pitt'g., Pa.
Place, Geo., 120 Broadway, N. Y. 81.
Pollock, Alex., 212 West st., N. Y. 33.
Post & Co., 154 Lake st., Chicago, Ill., and 165 W. Pearl st., Cincinnati, O.
Preble Machine Works Co., (The), 38-40 W. Monroe st., Chicago, Ill.
Prentiss Tool & Supply Co., 42 Dey st., N. Y.
Pusey & Jones Co., Wilmington, Del.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Rich, Fred. A., 20 S. Canal st., Chicago, Ill.
Risdon Iron & Locomotive Works, Beale & Howard, San Francisco, Cal.
Robertson, W. H., 48 S. Canal st., Chicago, Ill.
Robinson & Cary, St. Paul, Minn.
Rochester Machinery Mfg. Co., 34 W. Monroe st., Chicago, Ill.
Scaife Foundry & Machine Co., 28 & Smallman sts., Pitt'g., Pa.

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Scofield, Geo. L., 123 N. Front st., Phila., Pa.
Seneca Falls Co., Seneca Falls, N. Y.
Sheriff & Ashworth Machine Co., 80 Water st., Pitt'g., Pa.
Southwark Foundry & Machine Co., Washn. av. & 5th st., Phila., Pa.
Spangenberg, Pendleton & Co., Warren, O.
Stearns Mfg. Co., 29 Spear st., San Francisco, Cal., and Erie, Pa.
Superior Machine Works, 192-196 W. 12th st., Chicago, Ill.
Supplee, T. R., 149 N. 3d st., Phila., Pa.
Tacoma Foundry & Machine Co., Tacoma, W. T.
Taylor, Wm. & Sons, 23 Adams st., Brooklyn, N. Y.
Terrace Iron Works, 62 Terrace, Buffalo, N. Y.
Totten & Co., 24th and R. R., Pitt'g., Pa.
Tredegar Iron Works, Tredegar Co., Richmond, Va.
U. Baird Machinery Co., 75 Water st., Pitt'g., Pa.
Union Iron Works, 216 Market st., San Francisco, Cal.
Variety Iron Works, Minneapolis, Minn.
Wagner, Joseph & Co., 101 Mission st., San Francisco, Cal.
Wain, Wm. A. Woodbridge & Wayne, Detroit, Mich.
Watson & Stillman, 210 E. 43d, N. Y.
Wiggs & Bacon Co., (The), Birmingham, Ala.
Wilkin Mfg. Co., Milwaukee, Wis.
Wilkinson, J., Co., 77 State st., Chicago, Ill.
Wilson & Hendrie, Montague, Mich.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Wood's, S. A., Machine Co., 61 S. Canal st., Chicago, Ill.

Machinery—Grading.

McLachlan Steam Grading Co., 59 S. Clark, st., (room 24) Chicago, Ill.

Machinery—Grooming.

Pugh & Russell, Stewart Bldg., N Y.

Machinery—Hoisting.

Albertson & Douglass Machine Co., (The), 97 Main st., New London, Conn.
Allis, Edward & Co., Milwaukee, Wis.
Baggaley, J. & Co., 462 11th av., N. Y.
Barber, J. E & Co., 22 Ferry st., Norwich, Conn.
Bates, J., 200 President st., Baltimore, Md.
Bay State Iron Works, Erie, Pa.
Biggart, R., 762 Washington st., N. Y.
Blevney, John C., 59-63 7th av., Newark, N. J.
Box, A. & Co., 314 Green st., Phila, Pa.
Brown Hoisting & Conveying Machine Co., (The), Hamilton c. Belden, Cleveland, O.
Bullock, M. C., Mfg. Co., 509 Phœnix Bldg., Chicago, Ill. 10-11.
Burleigh Rock Drill Co., Fitchburg, M., and 115 Liberty st., N. Y.
Burrows & Cowen, 154 W. Broadway, N. Y.
Carlin's, Thomas, Sons, Lacock c. Sandusky, Allegheny, Pa.
Chisholm, W. & Sons, Case av., n. Payne ave., Cleveland, O.
Chrystal, Walsh & Moyles, 210 1st st., Troy, N.Y.
Claffy, John, 48 Dey st., N. Y. 91.
Cohoes Iron Foundry & Machine Co., Cohoes, N. Y.
Columbus Machine Co., Columbus, O.
Contractors Plant Mfg. Co., (The), Buffalo, N.Y.
Copeland & Bacon, 85 Liberty st., N. Y.
Crane Elevator Co., 219 S. Jefferson st., Chicago, Ill., and 40-42 Wall st., N. Y.
Curran, J. H., 135 W. 2d st., Cincinnati, O.
Cushing, N. B., ft. Morris, Jersey City, N. J.
Dederick, P. K. & Co., Albany, N. Y.
Demarest, E. B., 43 W. 64 thst., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Donohue, T., 237 E. 42d st., N. Y.
Eagle Iron Works, 252 Woodbridge st., Detroit, Mich.
Eaton & Prince, 74 Michigan st., Chicago, Ill.
Edelmeyer & Morgan Hod Elevator Co., 330 W. 49th st., N. Y.
Edwards, Joseph & Co., 412-416 Water st., N. Y.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. 5v.
Fox, Henry, 174 Centre st., N. Y.
Frank, Ernest & Son 424 W. Pratt st., Balt., Md.
Fraser & Chalmers, Union & Fulton sts., Chicago, Ill.
Frisbie, C. D. & Co., 123 N. 4th st., Phila. Pa.
Frisbie, D. & Co., 144 Ashmun st., New Haven, Conn., and 112 Liberty st., N. Y.
Gordon Bros., 141 Spring st., N. Y.
Gould, E. & Eberhardt, 113 N. J. R. R. av., Newark, N. J.
Graves, L. S. & Son, 30 Centre, Rochester, N. Y.
Harbertson, J. & Sons, Brownsville, Pa.
Harrington, Edwin, Son & Co., 15th st., c. Penna. av., Phila., Pa.
Harrison's, Wm. H., Sons, 1708 Barker st., Phila., Pa.
Haughton, N. Huron & Lafayette sts., Toledo, O.
Haughton & Kneisser, Toledo, O.
Hodge, Samuel F. & Co., 320 Atwater st., Detroit, Mich.
Hoffman, Chas. U., 309 W. 36th st., N. Y.
Howard, Geo. C., 12 Cortlandt, N. Y. and 18th, st., of Market, Phila., Pa.
Hull, Albert T., Madison av., c. E. 123d st., N. Y.
Hunt & Clapp, 95 5th av., Pitt'g., Pa. 72.
Industrial Works, Bay City, Mich.
Keiser, H., Bloomington, Ill.
Kelly, W. E., New Brunswick, N. J.
Kennedy, John, 92 La Salle av., Chicago, Ill.
Keys, F. W., 327 E. 60th st., N. Y.
Kimball, C. E., 93 Oliver st., Boston, M.
Knowlson & Kelley, 58 River st., Troy, N. Y.
Lechner Mfg. Co., West End State st. Bridge, Columbus, O.
Lees & Larsens, 37 South st., N. Y.
Lidgerwood Mfg. Co., ft. Dikeman, Brooklyn, N. Y., and 96 Liberty st., N. Y. 111.
Litchfield Car & Machine Co., Litchfield, Ill.
Lowell Machine Shops, 28 State st., Boston, M.
McCalvey, E. E., 602 Cherry st., Phila., Pa.
McCoy & Sanders, 26 Warren st., N. Y.
McLanthill, G. T. & Co., 120 Fulton st., Boston, M.
McLaren, J., Hoboken, N. J.
McMyler Mfg. Co., 180 Columbus, Cleveland, O.
Marshall Bros., 69 Diamond st., Pitt'g., Pa.
Mason, Volney W. & Co., Lafayette st., r. 405 High, Providence, R. I.
Maynard, J. Q. & Marsh, 12 Cortlandt st., N. Y.
Middlebrook Elevator Mfg. Co., 110 W. Larned, st., Detroit, Mich.
Miller & Johnson, Harrison av., Cincinnati, O.
Mitchell, C. H. & Co., 105 Mich. st., Chicago, Ill.
Moline Elevator Co., Moline, Ill.
Moore, S. H. & E. Y., 165 Lake st., Chicago, Ill.
Morse, Williams & Co., 108 Liberty st., N. Y., and 1105 Frankford av., Phila., Pa.
Moyles, I. N., 210 1st st., Troy, N. Y.
Munson & Oldham, Zanesville, O.
Murtaugh, Jas., 145 E. 42d st., N. Y.
Noble & Hall, Erie, Pa.
Norwalk Iron Works Co., South Norwalk, Conn.
Olsen, Tinius & Co., 500 N. 12th st., Phila., Pa.
Otis Bros. & Co., Potter Bldg., N. Y.; Yonkers, N. Y., and 6 S. Merrick st., Phila., Pa.
Ottumwa Iron Works, Ottumwa, Iowa.
Pacific Iron Works, Skidmore, P. H. & Sons, Bridgeport, Conn.
Parke & Lacy, 8 California st., San Francisco, Cal.
Pelham Hod Elevating Co., 426 W. 14th st., N. Y.
Post, E. C., 22 Burns' block, Detroit, Mich.
Reedy, H. J., 128 E. 8th st., Cincinnati, O.
Reedy, J. W., 530 Canal st., N. Y.
Reedy, J. W., Elevator Mfg. Co., (The), 83 Illinois st., Chicago, Ill.
Richard, Thomas, 60 Cliff st., N. Y.
Richards Elevator W'ks, 1232 Ridge, Phila., Pa.
Richmond, A. C., 209 Wash'n st., Boston, M.
Rickey, W. H., 116 Main st., Cincinnati, O.
Rochester Machinery Mfg. Co., 34 W. Monroe st., Chicago, Ill.
Safety Elevator Co., 170 Broadway, N. Y.
See, A. B. & Co., 116-120 Front st., Brooklyn, N. Y.
Sellers, Wm. & Co., Phila., Pa.
Skinner & Leary, 5-7 R. R. Pl., Newark, N. J.
Smith, M., 52 South st., N. Y.
Smith, W. F., 136 Freeman, Brooklyn, N. Y.
Smith & Haldeman Elevator Co., Superior st., c. Oak, Toledo, O.

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Smith & Lovett, 127 Albany st., Boston, M.
Snowden & Cowman, West & Leadenhall, Balt., Md.
Stokes & Parrish Machine Co., 30th & Chestnut sts., Phila., Pa., and 18 Cortlandt st., N. Y.
Stuebner & Woods, 168-170 E. 3d st., Long Island City, N. Y.
Teal Hoist Co., Phila., Pa.
Thomas, Richard, 60 Cliff st., N. Y.
Thompson, Baggaley & Co., 526 11th av., N. Y.
Trimbull & Chenley, 209 Wash'n st., Boston, M.
Tubular Barrow & Machine Co., 169 14th st., Jersey City, N. J. **32.**
Vanvorst, John, 172 W. Broadway, N. Y.
Wallace, J., Fulton st., c. Milwaukee av., Chicago, Ill.
Walsh, P. H., 333 West st., N. Y.
Warner, Warren, 714 W. 8th st., Cincinnati, O.
Waterbury Machine Co., Waterbury, Conn.
Webb, J. R., 120 Broadway, N. Y.
Webster, Camp & Lane Machine Co., Akron, O.
White, E. A., 125 Albany st., Boston, M.
Whittier Elevator Works, 306 11th av., N. Y.
Whittier Machine Co., 1176 Tremont st., Boston, M., and 91 Liberty st., N. Y.
Wood, T. & Co., N. 22d st., c. Wood, Phila., Pa.
Wright, Wm., Newburg, N. Y.
Yale & Towne Mfg. Co., (The), Stamford, Conn.

Machinery—Hydraulic.

Bisshor, T. C. & Co., 28 Light st., Balt., Md.
Geo. F. Blake Mfg. Co., 95-97 Liberty st., N. Y.
Cincinnati Stationary Engine & Hydraulic W'ks., 3d st., c. Lock, Cincinnati, O.
Clow, Jas. B. & Son, 212 Lake st., Chicago, Ill.
Crook, Horner & Bro., Baltimore st., c. Howard, Balt., Md.
Cumming, G. & Co., 1820 Fell st., San Francisco, Cal.
Cushing, N. B., Ft. Morris st., Jersey City, N. J.
Davidson Steam Pump Co., 77 Liberty st., N.Y.**11.**
Dienelt & Eisenhardt, 1308 Howard st., Phila., Pa.
Douglas, W. & B., Middletown, Conn.
Dudgeon, E. M., 706 Minna st., San Francisco, Cal.
Dudgeon, Richard, 24 Columbia st., N. Y.
Foss & Patterson, Minneapolis, Minn.
Garratt, W. T., 138 Fremont, San Francisco, Cal.
Gawthrop, A. & Son, Wilmington, Del.
Goulds Mfg. Co., Seneca Falls, N. Y.
Goulds & Austin, 167-169 Lake st., Chicago, Ill.
Greenberg, M., 205 Fremont, San Francisco, Cal.
Hall Steam Pump Co., 91 Liberty st., N. Y.
Hayes, John J., Kent st., c. West, Brooklyn, N. Y.
Howard, Geo. C., 12 Cortlandt st., N. Y., and 1798 Barker st., Phila., Pa.
Hughes Bros., Elm st., c. Wash'n., Cleveland, O.
Humphreys Mfg. Co., Mansfield, O.
Indianapolis Hydraulic Jack Co., Indianapolis, Ind.
Jacques, S., 780 Bedford av., Brooklyn, N. Y.
Kaufholz Bros., 106-108 Canal st., Cleveland, O.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Lexington Hydraulic & Mfg. Co., 157 B'way, N.Y.
Loring, H. E., 1st N. M., S. Boston, M
Lowell Machine Shops, 28 State st., Boston, M.
McCoy & Sanders, 26 Warren st., N. Y.
McGill, Manchester & Co., Pitt'g., Pa.
McGowan, John H. Co., (The), 134 W. 2d, st., Cincinnati, O.
McGowan Pump Co., 141 W. 2d st., Cincinnati, O.
Mackintosh, Hemphill & Co., (Ltd.), 12th st., c. Ætna, Pitt'g., Pa.
Middlebrook Elevator Mfg. Co., Detroit, Mich.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
Phenix Iron Foundry, Elm st., c. Eddy, Providence, R. I.
Pond Engineering Co., St. Louis, Mo.
Prag, M., 125 Clay st., San Francisco, Cal.
Pulling, James G. & Co., 5-7 Scioto st., Columbus, O.
Roberts, G. J. & Co., Dayton, O.
Richmond Locomotive and Machine Works, Richmond, Va. **12.**
Scaife Foundry & Machine Co., (Ltd.), 28th st., c. Smallman, Pitt'g., Pa.
Shaw, Thos., 12 Ridge, Phila., Pa.
Shields & Duff, Marion av., c. Martin, Allegheny, Pa.
Shurtz, M. B. & Co., 801 E. Lombard, Balt., Md.
Smith, F. & Co., 130 Beale st., San Francisco, Cal.
Smith, Vaile & Co., Dayton, O.
Snowden & Cowman, 148 W. West st., Balt., Md.
Southwark Foundry and Machine Co., Washington av. and 5th st., Phila., Pa.
Taylor, Wm. & Sons, 56 Adams st., B'klyn, N. Y.
Tuerk (The) Hydraulic Power Co., 12 Cortlandt st., N. Y.
Watson & Stillman, 204-210 E. 43d st., N. Y.
Weed & Kingwell, 125 1st, San Francisco, Cal.
Whittier Machine Co., 91 Liberty st., N. Y.
Worthington, H. R., Rapelye, c. Van Brunt, Brooklyn, N. Y.; 80-88 Liberty st., N. Y.; 154 W. 2d st., Cincinnati, O. **89.**

Machinery—Labor Saving.

Wells Bros. & Co., Greenfield, M.
Wiley & Russell Mfg. Co., Greenfield, M.

Machinery—Metal Working.

Acme Machinery Co., Cleveland, O.
Adt, John & Son, New Haven, Conn.
Ames Mfg. Co., 33 Pemberton sq., Boston, M. **64.**
Baird, U., Machinery Co., 75 Water st., Pitt'g., Pa.
Baker, Herbert, 99 Erie st., Toledo, O.
Barker, Wm. & Co., 140 E. 6th st., Cincinnati, O.
Barnes', W. F. & John, Co., 611 Ruby st., Rockford, Ill. **49.**
Battle Creek Machinery Co., Battle C'k, Mich. **17.**
Bement, Miles & Co., Phila., Pa., 120 B'way, N. Y.
Betts Machine Co., Wilmington, Del.
Birmingham Iron Foundry, Birmingham, Conn.
Blake & Johnson, Waterbury, Conn.
Bullard, E. P., 14 Dey st., N. Y.
Crosby, G. A. & Co., 261 Randolph st., Chicago, Ill.
Fay, J. A. & Co., Cincinnati, O., 120 B'way, N. Y.
Fitchburg Machine Works, 13 Main st., Fitchburg, M.
Garvin, E. E. & Co., 139 Centre st., N. Y.
George Place Machinery Co., 120 B'way, N. Y. **81.**
Gould & Eberhardt, Newark, N. J.
Hendey Machine Co., Torrington, Conn.
Hill, Clarke & Co., 156 Oliver st., Boston, M.
Hilles & Jones, Wilmington, Del.
Howard, Geo. C., 12 S. 18th st., Phila., Pa., and 12 Cortlandt st., N. Y.
Hurlbut & Rogers, South Sunbury, Mass.
Jensen & Wold, 76 Market st., Chicago, Ill.
Kennedy, D., 315 3d av., S. Minneapolis, Minn.
Kerrick, J. H., Minneapolis, Minn.
Lee & Hunt, Crocus st., Nottingham, Eng.
Long & Allister Co., Hamilton, O.
McFarlan Nottingham Co., 220 W. 2d st., Cincinnati, O.
Merriman, A. H., Meriden, Conn.
National Machinery Co., Tiffin, O.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Niles Tool Works, Hamilton, O.
Packard, O. I., Milwaukee, Wis.
Parke & Lacy, 8 California st., San Francisco, Cal.
Paul, Geo. K. & Co., 98 Milk st., Boston, M.
Peck, Stow & Wilcox, 27 Chambers st., N. Y.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Place, Geo., 120 Broadway, N. Y. **81.**
Pond Machine Tool Co., Worcester, M., and Plainfield, N. J.
Pratt & Whitney Co., Hartford, Conn.
Racine Hardware Mfg. Co., Racine, Wis.
Rice Bros. Mfg. Co., Meadville, Pa.
Robinson, J. M. & Co., 225 W. 2d st., Cincinnati, O.
Sellers, Wm. & Co., Phila, Pa.
Sherriff & Ashworth Machine Co., 80 Water st., Pitt'g., Pa.
Smith, H. B. Machine Co., 925 Market st., Phila., Pa.
Standard Machine Works, 117 N. Front st., Camden, N. J.
Stow Flexible Shaft Co., Phila., Pa. **26.**
Sweetser, Wm. A., 39 Montello st., Brockton, M.
York, S. M., 44 S. Water st., Cleveland, O.

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Machinery—Milling.

Adt, John & Son, New Haven, Conn.
American Tool & Machine Co., (The), 84 Kingston st., Boston, M.
Ames Mfg. Co., 33 Pemberton st., Boston, M. 64.
Avery & Burton, 42-48 S. Clinton st., Chicago, Ill.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Betts Machine Co., Wilmington, Del.
Bliss, E. W., Co., 17 Adams st., Brooklyn, N. Y.
Brainard Milling Machine Co., Boston, M.
Brown & Sharpe Mfg. Co., Providence, R. I.
Cincinnati Screw & Tap Co., (The), 2d & Plum sts., Cincinnati, O.
Enynon, W. R., 63 Centre st., Cleveland, O.
Fay & Scott, Dexter, Me.
Gage Machine Works, Waterford, N. Y.
Garvin, R. E. & Co., 139-143 Centre st., N. Y.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. 60.
Reed, F. E., 120-124 Gold st., Worcester, M.
Slate, Dwight, Hartford, Conn.

Machinery—Mill and Rolling Mill.

Abbott & Thurber, Olean, N. Y.
Birmingham Iron Foundry, Birmingham, Conn., and 95 Liberty st., N. Y.
Fischer Foundry & Machine Co., (The), S. 21st st., c. Mary, Pitt'g., Pa.
Fisher Engine, Foundry & Machine Works, 23d and 24th and Smallman sts., Pitt'g., Pa.
Garrison, A., Foundry Co., 10-12 Wood st., Pitt'g., Pa.
Mackintosh, Hemphill & Co., (Ltd.), 12th c. Etna, Pitt'g., Pa.
Moore, James, 16th st., c. Buttonwood, Phila., Pa.
Phenix Iron Foundry, c. Elm and Eddy sts., Providence, R. I.
Poole & Hunt, 7 German st., Phila., Pa.
Totten & Co., 24th and R. R., Pitt'g., Pa.

Machinery—Mining.

Allis, Edward & Co., Milwaukee, Wis.
American Mfg. & Supply Co., 38 E. Madison st., Chicago, Ill., and 10-12 Dey st., N. Y.
American Nail Machine Co., Ashtabula, O.
Aulmann, L. and G. W., Des Moines, Iowa.
Barrows & Co., 66 Broadway, N. Y.
Beckett & McDowell Mfg. Co., 120 Liberty, N. Y.
Birmingham Iron Foundry, Birmingham, Conn.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Bullock, M. C., Mfg. Co., 138 Jackson, Chicago, Ill. 10-11.
Burleigh Rock Drill Co., Fitchburg, Mass.
Carlin's, S. Thos. Sons, Lacock st., c. Sandusky, Allegheny, Pa.
Carthage Foundry & Machine Shop, Carthage, Mo.
Clayton Air Compressor Works, 45-47 York st., B'kln, N. Y., and 43 Dey st., N. Y. 9.
Colorado Iron Works, 33d & Wazee sts., Denver, Col.
Copeland & Bacon, 85 Liberty st., N. Y.
Cushing, N. B., ft. Morris st., Jersey City, N. J.
Davis, Cresswell & Co., 408 Blake st., Denver, Col.
Diamond Prospecting Co., 22 W. Lake, st., Chicago, Ill.
Dickson Mfg. Co., Scranton, Pa.
Dunbar, Brown & Co., Youngstown, O.
Duncan, W. P. & Co., Bellefonte, Pa.
DuQuoin Iron Works, DuQuoin, Ill.
Excelsior Iron Works, 100 N. Clinton st., Chicago, Ill.
Fairhaven Iron Works, Fairhaven, Mass.
Felber, Geo., 307 Gratiot st., St. Louis, Mo.
Fraser & Chalmers, Union & Fulton sts., Chicago, Ill., and 2 Wall st., N. Y.
Garner, Jos. W., Ashland, Pa.
Gates Iron Works, 50 S. Clinton st., Chicago, Ill.
Gordon & Maxwell Co., (The), Hamilton, O.
Griffin Mfg. Co., 92 Liberty st., N. Y.
Hendrie & Bolthoff Mfg. Co., Denver, Col.
Hodge, S. F. & Co., 320 E. Atwater st., Detroit, Mich.
Imlay, Wm. L., 312 Stock Exchange Place, Phila, Pa.
Ingersoll Rock Drill Co., 10 Park Place, N. Y.
Iron Bar Mfg. Co., Marquette, Mich.
Jackson, J. W., 15th & Wewatta sts., Denver, Col.
Jeffrey Mfg. Co., (The), Columbus, O.
Jennings, D. U., 106-108 Liberty st., N. Y.
Johnson, Ruffer & Co., Ottumwa, Ia.
Kaestner, Chas. & Co., 303-311 S. Canal st., Chicago, Ill.
Kennedy, C. E., 438 Blake st., Denver, Col.
Kimpien Hydraulic Press Co., 403 5th av., Chicago, Ill.
Krom, Stephen R., 151 Cedar st., N. Y.
Lancaster, James H., 187 B'way, N. Y. 4.
Lechner Mfg. Co., (The), Columbus, O.
Litchfield Car & Machine Co., Litchfield, Ill.
Marinette Iron Works Co., Marinette, Wis.
Mecklenburg Iron Works, Charlotte, N. C.
Meech & Co., 3 City Hall, Cleveland, O.
Melcher, Chas. W., 811 N. 2d st., St. Louis, Mo.
Merritt, E. & Co., Brocton, M.
Montgomery, J., 2 Opera Block, Denver, Col.
Morris Co., Machine & Iron Co., Dover, N. J.
Mundy, Jos. S., 22 Prospect st., Newark, N. J.
Murray Iron Works Co., Burlington, Iowa.
Norwalk Iron Works Co., (The), South st., Norwalk, Conn.
Pacific Iron Works, 121 1st st., San Francisco, Cal.
Paul, T. H. & Sons, Frostburg, Md.
Penberthy, Wm., Leadville, Col.
Pittsburgh Mfg. Co., Pitt'g., Pa.
Rand Drill Co., 23 Park Place, N. Y. 1.
Raymond Bros., 303 S. Canal st., Chicago, Ill.
Ribon & Marche, 144 1st st., Jersey City, N. J.
Rix, E. A. & Co., 18 Fremont st., San Francisco, Cal.
Ross, Chas., Jr., 31-33 S. 5th st., Brooklyn, E. D., N. Y.
St. Louis Vise & Tool Co., 1420 N. 10th st., St. Louis, Mo.
Sampson, Geo. H., 231 State st., Boston, M.
Scoville Iron Works, 250 S. Clinton, Chicago, Ill.
Sergeant Drill Co., 16 Dey st., N. Y.
Shortsleeve, David & Co., Rutland, Vt.
Steele & Condict, 80 Pearl st., Jersey City, N. J.
Sullivan Machine Co., Claremont, N. H.
Sweetser, Wm. A., 89 Montello st., Brockton, M.
Tatem, B. H., Helena, Mont.
Thompson, Alexander, Fitchburgh, M.
Totten & Co., Pitt'g., Pa.
Union Iron Works, 216 Market st., San Francisco, Cal.
Valentine Bros., Produce Exchange, N. Y.
Vulcan Iron Works, Wilkes-Barre, Pa.
Waring, J. B. & Sons, 106-108 Liberty st., N. Y.
Webster, Camp & Lane Machine Co., Akron, O.
Whitcomb, Geo. D., 175 Dearborn st., (Room 33) Chicago, Ill.
Williams, John M., Newburyport, M.
Wiggs & Bacon Co., (The), Birmingham, Ala.
Wormer, G. S. & Son, 36 W. Monroe st., Chicago, Ill.
Wyoming Valley Mfg. Co., Wilkes-Barre, Pa.

Machinery—Mortising.

Buss Machine Works, Grand Rapids, Mich. 58.
Egan Company, (The), 232-250 W. Front, st., Cincinnati, O.
Fay & Co., J. A., Cincinnati, O., 120 B'way, N. Y.
Gilkerson Machine Works, (The), Homer, N. Y.
Kellogg, Wm. P., Troy, N. Y.
Lane & Bodley Co., 263 Water st., Cincinnati, O.
McIvers Bros. & Co., Worcester, M.
Riehle Bros., 50 S. 4th st., Phila., Pa.
Schofield & Kohlsaat, 184 Indiana st., Chicago, Ill.
Witherby, Rugg & Richardson, 26 Salisbury st., Worcester, M.

Machinery—Pneumatic.

Guild & Garrison, Brooklyn, N. Y.

Machinery—Pumping.

Allis, Edward & Co., Milwaukee, Wis.
Beckett & McDowell Mfg. Co., (The), 120 Liberty st., N. Y.

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Blake, Geo. F. Mfg. Co., 95-97 Liberty st., N. Y.
Blake Mfg. Co., (The), 44 Washington st., Boston, M.
Bullock, M. C., Mfg. Co., 138 Jackson st., Chicago Ill. **10-11.**
Dean Bros., Steam Pump Works, Indianapolis, Ind.
Deane Steam Pump Co., (The), Holyoke, M.
Dickson Mfg. Co., Scranton, Pa.
Edwards, Jas. & Co., 412-416 Water st., N. Y.
Gordon & Maxwell Co., (The), Hamilton, O.
Guild & Garrison, Brooklyn, N. Y.
Hall Steam Pump Co., 91 Liberty st., N. Y.
Holly Mfg. Co., Lockport, N. Y., and 45 Broadway, N. Y.
Knowles Steam Pump Co., (The), 44 Washington st., Boston, M., and 93 Liberty st., N. Y.
Lawrence Machine Co., Mason Bldg., Boston, M.
Mecklenburg Iron Co., Charlotte, N. C.
Morris Co., Machine and Iron Co., Dover, N. J.
Morris Machine Works., Baldwinsville, N. Y.
Shepard Mfg. Co., (The), Union City, Conn.
Wilson—Snyder Mfg. Co., 52 Water st., Pitt'g., Pa.
Wood & Co., R. D., 400 Chestnut st., Phila., Pa.
Worthington, Henry R., 88 Liberty st., N. Y. **89.**
Wright, Wm., Newburg, N. Y.

Machinery—Punching, Cutting and Pipe Cutting.

Aitchison & Little, 20 W. Centre st., Cleveland, O.
Bellfield, H. & Co., 435 N. Broad st., Phila., Pa.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Betts Machine Co., Wilmington, Del.
Bridgeport Steel Cutting Co., Bridgeport, Conn.
Comb. Power Punch and Eyeletting Machine Co., 49 High st., Boston, M.
Cruickshank, Geo. M., 276-286 Dyer st., Providence, R. I.
Dickson Mfg. Co., Scranton, Pa.
Forbes & Curtis, Bridgeport, Conn.
Herrick, W., Northampton, M.
Merritt, I. E., Machinery Co., 56 Market st., Buffalo, N. Y.
New Doty Mfg. Co., Janesville, Wis.
Niagara Stamping and Tool Co., Buffalo, N. Y.
Niles Tool Works, Hamilton, O.
Pancoast & Maule, 243-245 S. 3d st., Phila., Pa.
Saunder's Sons, D., Yonkers, N. Y.
Star Tool Co., (The), Beverly c. Mason st., Providence, R. I.
Warth, Albin, Stapleton, N. Y.

Machinery—Quarrying and Stone Cutting.

Excelsior Iron Works Co., Columbus st., Cleveland, O.
Lincoln Iron Works, Rutland, Vt.
McDonald Stone Cutting Mach. Co., Mason, N. H.
Rand Drill Co., 23 Park Pl., N. Y. **1.**
Tilghman, B. C. & R. A., 1118-1126, S. 11th st., Phila., Pa.
Walter, Wright, 541 W. 35th st., N. Y.

Machinery—Rail Bending.

Ayres, Abraham, 502-518 W. 45th st., N. Y.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Brooklyn Ry. Supply Co., (The), 44 Walworth st., Brooklyn, N. Y.
Chester Steel Casting Co., 407 Library st., Phila., Pa., (Works) Chester, Pa. **46.**
Craig, Wm. P., 95 Liberty st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Dwight, E. P., 407 Library st., Phila., Pa.
Greeley, (The), E. S. & Co., 5-7 Dey st., N. Y.
Harris, T. Wm. & Co., 2 Nassau st., N. Y. **79.**
Hazen, C. D., Martinsburg, N. Y.
Howard Childs & Co., Hamilton Bldg., Pitt'g., Pa.
Industrial Works, Bay City, Mich.
Lewis & Fowler Mfg. Co., (The), 27-35 Walworth st., Brooklyn, N. Y.
McCoy & Sanders, 26 Warren st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y., and Phenix Bldg., Chicago, Ill.
Wm. Wharton, Jr. & Co. Inc., 25th st. and Washington av., Phila., Pa.
Wright, E. P., Phila., Pa.

Machinery—Railroad Carshop.

Battle Creek Machinery Co., Battle C'k, Mich. **17.**
Betts Machine Co., Wilmington, Del.
Egan Co., (The), 202 W. Front st., Cincinnati, O.
Fay, J. A. & Co., Cincinnati, O.
Goodell & Waters, Phila., Pa., and 11 S. Canal st., Chicago, Ill.
Gould (E.) & Eberhardt, nr. Market st. depot, Newark, N. J.
Graham, J. S. & Co., 272 Lyell av., Rochester, N. Y.
Niles Tool Works, Hamilton, O., and 96 Liberty st., N. Y.
Place, Geo., 120 Broadway, N. Y. **81.**
Power, L. & Co., 12 S. 23d st., Phila., Pa.
Pratt & Whitney Co., (The), Hartford, Conn.
Rogers, C. B. & Co., Norwich, Conn., and 109 Liberty st., N. Y.
Rogers Locomotive & Machine Works, Paterson, N. J., and 44 Exchange Place, N. Y.
Rowley & Hermance, Williamsport, Pa.

Machinery—Riveting.

Adt, John & Son, State st., c. Mill River, New Haven, Conn.
Allen, John F., 221-223 Rider av., N. Y.
Allen Portable Pneumatic Riveting Machine Co., 82 Nassau st., N. Y.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Blake & Johnson, Waterbury, Conn.
Providence Steam Engine Co., Providence, R. I.
Waterbury Farrel F'dry and Mach. Co., Waterbury, Conn.

Machinery—Sand Papering.

Marshall, T. B., Sidney, O.
White, John A., Concord, N. H.
Winship Mfg. Co., Racine, Wis.

Machinery—Saw Mill.

Adams, S. & Son, Rome, N. Y.
Armstrong Bros., Springfield, O.
Bangor Foundry & Machine Co., 8-10 Central, Bangor, Me.
Battle Creek Machinery Co., Battle C'k, Mich. **17.**
Birdsall Co., (The), Auburn, N. Y.
Buss Machine Works, Grand Rapids, Mich. **58.**
Chandler & Taylor, Indianapolis, Ind.
Chase & Son, 236 Federal st., Portland, Me.
Chase Turbine Mfg. Co., Orange, M.
Clark Machine Co., Turners Falls, M.
Cooke & Co., 22 Cortlandt st., N. Y.
Cooper, C. & G., & Co., Mount Vernon, O. **58.**
Crown Iron Works, 113 2d av. E. D., Minneapolis, Minn.
Curtis & Co. Mfg. Co., 60-66 W. Monroe st., Chicago, Ill., and 817-819 N. 2d st., St. Louis, Mo.
Davies Iron Works, Muskegon, Mich.
Egan Company, (The), 232-250 W. Front st., Cincinnati, O.
Enterprise Mfg. Co., Columbiana, O.
Erie City Iron Works, Erie, Pa.
Fay & Scott, Dexter, Me.
Flint, Chas. M., 5 Main st., Fitchburg, M.
Foos, G. S. & Co., Springfield, O.
Fostoria Foundry & Machine Works, Fostoria, O.
Griffith & Wedge Co., (The), Zanesville, O.
Hadley, Wright & Co., 113-125 S. Tennessee st., Indianapolis, Ind.
Harrisburg Car Mfg. Co., (The), Harrisburg, Pa. **7.**
Haughton & Kniesser, Toledo, O.
Herrick Webster, Northampton, M.
Hill, W. E. & Co., Kalamazoo, Mich.
Hinckley & Egery Iron Co., Bangor, Me.
Hood, J. B., Millview, M.
Kinnard, Haines & Co., Minneapolis, Minn.
Lane Mfg. Co., Montpeller, Vt.
Lombard, Geo. R. & Co., Augusta., Ga.
McIvers Bros. & Co., Worcester, M.
McMillan & Co., Stockton, Ala.
Massena Mill Co., Massena, N. Y.
Michigan Iron Works, Grand Rapids, Mich.

The numbers following names indicate page on which the firm advertises.

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Murray, D. J., Mfg. Co., Wausau, Wis.
Ritchie & Dyer Co., Hamilton, O.
Rodgers, E. W., Perry, N. Y.
Sioux City Foundry & Machine Works, Sioux City, Iowa.
Slate, Dwight, Hartford, Conn.
Smith, Myers & Schnier, 323 W. Front st., Cincinnati, O.
Spangenberg, Pendleton & Co., Warren, O.
Stearns Manufacturing Co., San Francisco, Cal.
Struthers, Wells & Co., Warren, Pa.
Swartwout, L. B., Three Rivers, Mich. 13.
Sweeney, W. A. & Bro., Jeffersonville, Ind.
Tatum & Bowen, 25 Main st., San Francisco, Cal.
Tool, J. S., Blue Wing, N. C.
Towanda Foundry Co., Towanda, Pa.
Vaughn, J. D., Rochester, Mass.
Watertown Steam Engine Co., Watertown, N. Y.
Whitman Agricultural Co., 8th st. and Clark av., St. Louis, Mo.
Williams, White & Co., Moline, Ill.
Woolverton & Tinsman, Williamsport, Pa.
Wright, Walter, 541 W. 35th st., N. Y.

Machinery—Screw.

Armstrong Mfg. Co., Bridgeport, Conn. 33.
Bement, Miles & Co., Callowhill and 21st sts., Phila., Pa., 120 Broadway, N. Y.
Brown & Sharpe Mfg. Co., Providence, R. I.
Butterfield & Co., Derbyline, Vt.
Cook, A. S., 80 Hayshope st., Hartford, Conn.
Garvin, E. E. & Co., 139-143 Centre st., N. Y.
Hart Mfg. Co., Wilson av. and L. S. & M. S. R. R., Cleveland, O.
Slate, Dwight, Hartford, Conn.
Warner & Swasey, Cleveland, O.
Waterbury, Farrel Foundry & Mach. Co., Waterbury, Conn.
Wells Bros. & Co., Greenfield, M.
Wiley & Russell Mfg. Co., Greenfield, M.

Machinery—Second Hand.

Crown Iron Works, 113 2d av., S. E. Minneapolis, Minn.
Forsaith, S. C. & Co., Manchester, N. H.
Jenks, James & Co., 48 Randolph, Detroit, Mich.
Miller, Geo. H., 18 Dorcester av., Boston, M.
N. Y. Machine Depot, Bridge Store 16, N. Y.
Prentiss Tool & Supply Co., 42 Dey st., N. Y.
Rollstone Mach. Co., 65 Water st., Fitchburg, M.
Schofield, Geo. L., 123 N. Front, st., Phila., Pa.
Star Machine Works, Kokomo, Ind.
Wain, Wm. A., Woodbridge & Wayne, Detroit, Mich.

Machinery—Ship.

American Ship Windlass Co., Waterman c. E. River, Providence, R. I. xii.
Fletcher, W. A. & Co., 266 West st., N. Y.
Knowlton Bros., Camden, Me.
Richardson, Nathan, Gloucester, M.

Machinery—Special.

Abbe, Charles C., 419 1st st., B'lyn, E. D., N. Y.
Adams & Price Machine Co., 41 Indiana st., Chicago, Ill.
Ætna Machine Co., Warren, O.
Avery & Burton, 48 S. Clinton st., Chicago, Ill.
Barrett, Chas. E., Brattleboro, Vt.
Beecher & Peck, New Haven, Conn.
Bliss, E. W. & Co., 17 Adams st., Brooklyn, N. Y.
Boston Blower Co., 276 Franklin st., Boston, M.
Cincinnati Screw & Tap Co., (The), 2d and Plum sts., Cincinnati, O.
City Machine Co., Cleveland, O.
Coe & Wilkes, Painesville, O.
Colts Patent Fire Arms Mfg. Co., Hartford, Conn.
Crary, C. W. & Son, 41 E. Indiana st., Chicago, Ill.
Crosby, G. A. & Co., 259 Randolph st., Chicago, Ill.
Dallett, Thos. H. & Co., Phila., Pa.
Davies Iron Works, Muskegon, Mich.
Detrich & Harvey, Balt., Md.
Detroit Machine Screw Works, Detroit, Mich.
Enterprise Machine Co., 423 4th st., Minneapolis, Minn.
Eynon, W. R. & Co., Leonard st., Cleveland, O.
Faries, Robert, Decatur, Ill.
Fischer Foundry & Machine Co., (The), S. 21st st., c. Mary, Pitt'g., Pa.
Fisher, Wm., 23d and Smallman sts., Pitt'g., Pa.
Fisher Engine Foundry & Machine Works, 23d, 24th and Smallman sts., Pitt'g., Pa.
Gilkerson Machine Works, Horner, N. Y.
Gordon & Gilbert, 218 New st., Phila., Pa.
Haughton, N., Huron n. Lafayette st., Toledo, O.
Hartz, Henry V., 21 Champlain st., Cleveland, O.
Heckert Mfg. Co., 22 Union Sq., N. Y.
Herrick & Cowell, New Haven, Conn.
Hewlings & Goehring, 204 Lake st., Chicago, Ill.
Hoggson & Pettis Mfg. Co., 68 Court st., New Haven, Conn.
Howell, Silas J., 18 Reed's Block, Boston, M.
Johnson, Israel H. J. & Co., 1423 Callowhill st., Phila., Pa.
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill., and 419 Walnut st., Phila., Pa.
Kaufholz Bros., 106-108 Canal st., Cleveland, O.
Kilson Machine Co., Lowell, M.
Lipe, C. E., 29 Geddes st., Syracuse, N. Y.
National Machinery Co., Tiffin, O.
Pacific Iron Works, Bridgeport, Conn.
Paddock Iron Works, St. Johnsbury, Vt.
Payne, B. W. & Sons, Elmira, N. Y.; 45 Dey st., N. Y., and 10 S. Canal st., Chicago, Ill.
Post & Co., 154 E. Lake st., Chicago, Ill.
Pratt & Whitney Co., Hartford, Conn.
Riehle Bros., 50 S. 4th st., Phila., Pa.
Robinson, J. M. & Co., 225-229 W. 2d st., Cin., O.
Rowland, F. C. & A. E., New Haven, Conn.
Royle, John & Sons, Railroad av., c. Grand st., Paterson, N. J.
Slate, Dwight, Hartford, Conn.
Tod, Wm. & Co., Youngstown, O.
Warner & Swasey, Cleveland, O.
Warren, Wm. H., Worcester, M.

Machinery—Tunneling.

American Mfg. & Supply Co., (Ltd.), 10-12 Dey st., N. Y.
Ingersoll Rock Drill Co., 10 Park Place, N. Y.
Rand Drill Co., 23 Park Place, N. Y. 1.

Machinery—Twisting.

Bridesburg Mfg. Co., (The), 201 Chestnut st., Phila., Pa.
Brownell, G. L., 16 Union st., Worcester, M.
Cleveland Machine Works, Worcester, M.
Collins Bros., Central Falls, R. I.
Franklin Machine Co., Providence, R. I.
Hopedale Machine Co., Hopedale, M.
Hunt, Rodney, Machine Co., Orange, Mass.
Improved Twisting Machinery, 16 Union st., Worcester, M.
Kinyon Bros., Raritan, N. J.
Leigh, F. A. & Co., 40 Water st., Boston, M.
Lombard, N. A. & Co., 73 School st., Worcester, M.
Pierce & Middleton, 24 N. Front st., Boston, M.
Providence Machine Co., 564 Eddy st., Providence, R. I.
Robinson, D. F., Lawrence, M.
Sargent's Machine Works, Graniteville, M.
Smith, Jas. & Co., 411-421 Race st., Phila., Pa.
Windle, J. E., Worcester M.

Machinery—Veneering.

Coe & Wilkes, Painesville, O.
DuQuoin Iron Works, DuQuoin, Ill.
Farrel Foundry & Machine Co., (The), Ansonia, Conn.
Trevor & Co., Lockport, N. Y.

Machinery—Water Works.

Blake Mfg. Co., (The), 44 Wash'n st., Boston, M.
Dean Bros., Steam Pump Works, Indianapolis, Ind.
Dean Steam Pump Co., Holyoke, M.

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Gordon & Maxwell Co., (The), Hamilton, O.
Holly Mfg. Co., Lockport, N. Y.

Machinery—Wood Working.

Abbott, D. S., Olean, N. Y.
Abbott, John R., Greenfield, Ind.
Abbott & Thurber, Olean, N. Y.
Adams, S. & Sons, Rome, N. Y.
Alexander, G. W., 207 Wash'n. av., Minneapolis, Minn.
Alexander, Bradley & Dunning, Syracuse, N. Y.
Allen Mfg. Co., 55 S. Canal st., Chicago, Ill.
Allis, Edward P. & Co., Milwaukee, Wis.
Atlanta Saw Works, Atlanta, Ga.
Atlantic Works, N. 22d st., nr. Arch, Phila., Pa.
Atkins, E. C. & Co., Indianapolis, Ind., and Memphis, Tenn.
Bailey Mfg. Co., Owosso, Mich.
Bailey, S. R., Amesbury, M.
Baird, U., Machinery Co., 75 Water st., Pitt'g., Pa.
Baker, Herbert, 98 Erie st., Toledo, O.
Ball, D. H. & Sons, Renovo, Pa.
Barbaroux & Co., 31 3d st., Louisville, Ky.
Barnes Co., W. F. & John, Rockford, Ill. **49.**
Barnes Tool Co., 958 Grand st., N. Haven Conn.
Barney & Kilby, Sandusky, O.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Battle Creek Machine Co., Battle C'k, Mich. **17.**
Baxter, C. M., Lebanon, N. H.
Baxter Machine Co., Lebanon, N. H.
Beach, H. L., Montrose, Pa.
Beekman, G. V., 181 S. Clinton st., Chicago, Ill.
Beers, J. M. & Co., 21 Whitney av., New Haven, Conn.
Bennett, Miles & Co., Phila., Pa.
Benjamin & Co., 17 S. Canal st., Chicago, Ill.
Benjamin & Co., South Evanston, Ill.
Bentel, Margedant & Co., Hamilton, O.
Berlin Machine Co., Berlin, Wis.
Berry & Place Machine Co., 8 California st., San Francisco, Cal.
Bickford & Huffman, Macedon, N. Y.
Blaisdell, J. H., 550 W. 25th st., N. Y.
Blaisdell, P. & Co., Worcester, M.
Blakeslee Mfg. Co., Duquoin, Ill.
Blerney, John C., 59 7th av., Newark, N. J.
Bolander, L. P., 118 Mission st., San Francisco, Cal.
Born, Fred, Portland, Ore.
Bryant, C., Keene, N. H.
Buss Machine Works, 48 S. Canal st., Chicago, Ill.
Buss Machine Works, Grand Rapids, Mich. **58.**
Butler & Gardner, 200-212 Liberty st., Pitt'g., Pa.
Butterworth & Lowe, Grand Rapids, Mich.
Campbell, J. O. & Sons, 216 1st, Louisville, Ky.
Carey, W. W., 190 Broadway, Lowell, M.
Challoner's, Geo. Sons, Oshkosh, Wis.
Chase & Son, 236 Federal st., Portland, Me.
Chase Turbin Mfg. Co., Orange, M.
Chillicothe Foundry & Mach. Co., Chillicothe, O.
Clark Bros., Belmont, N. Y.
Clarkson, Jos. S. & Son, 75 N. Front st., Baltimore, Md.
Clunn, C. S. & Co., 915 Samson st., Phila., Pa.
Colborn, L. S., Oberlin, O.
Colladay, Jos. O. & Bro., 626 Race st., Phila., Pa.
Connell & Dengler, 20 Furnace st., Rochester, N. Y.
Cordesman Machine Co., 50 Butler st., Cin., O.
Cordesman, Meyer & Co., 182 W. 2d st., Cin., O.
Curtis & Co. Mfg. Co., 60-66 W. Monroe st., Chicago, Ill.
Defiance Machine Works, 109 Liberty st., N. Y., and Defiance, O.
Dietz, Will & Co., 189 W. Pearl st., Cincinnati, O.
Dietz, Woermaun & Co., 60 Plum st., Cincinnati, O.
Dodds, Alex., 32 Mill st, Grand Rapids, Mich.
Dole, J. L., 207 Centre st., N. Y.
Eddy, Geo. B., 898 Madison st., N. Y.
Edwards, Stevens & Co., Winooski, Vt.
Egan Company, (The), 232-250 W. Front, Cin., O.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. **57.**
Esplin, Chas., Minneapolis, Minn., and Eau Claire, Wis.
Fairbanks, Geo. L., Worcester, M.
Farquhar, A. B., York, Pa.
Fay, J. A. & Co., 207 Lake st., Chicago, Ill.; 720 N. 2d st., St. Louis, Mo., and 267 Front st., Cincinnati, O.
Fay & Scott, Dexter, Me.
Filer & Stowell Co., (The), Milwaukee, Wis.
Fisher & Ling, Pulaski, N. Y.
Fitchburg Machine Works, Fitchburg, M.
Fletcher, H., 923 W. Main st., Louisville, Ky.
Flink, Chas. M., 5 Main st., Fitchburg, M.
Forsalth, S. C., Machine Co., Manchester, N. H.
Francis, Chas. E., Cincinnati, O.
Frank & Co., 176 Terrace st., Buffalo, N. Y.
Frazer & Archer, 121 Chambers st., N. Y.
Future City Mfg. Co., 212 Morgan st., St. Louis, Mo.
Gail & Bumiller, 179 E. Wash'n. st., Chicago, Ill.
Garland, M., Bay City, Mich.
Garmen & Lentz, 928 N. 3d st., Phila., Pa.
Garvin, E. E. & Co., 139 Centre st., N. Y.
Gates, P. T., 39 Dey st., N. Y.
Gemlo, D. W. & Son, 917 Washington av., Minneapolis, Minn.
George Place Machinery Co., 120 B'way, N.Y. **81.**
Georgia Machinery Co., Atlanta, Ga.
Georgia Mfg. Co., Atlanta, Ga.
Gerlach, Peter & Co., Cleveland, O.
Gilman & Townsend, Springfield, Vt.
Gleason, E. & F., Susquehanna av., c. American, Phila., Pa.
Glen Cove Machine Co., (Ltd.), 28 Clay st., Brooklyn, N. Y.
Goodell & Waters, 11-13 S. Canal st., Chicago, Ill, and 3102 Chestnut st., Phila., Pa.
Goodspeed, G. N., Winchendon, Mass.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Graham, J. S. & Co., 266 Lyell av., Rochester, N. Y.
Greenlee Bros. & Co., 227 W. 12th st., Chicago, Ill.
Gregory, H. P. & Co., 2 California st., San Francisco, Cal.
Greist, Chas. W., Erie, Pa.
Griswold, G. M., 187 St. John st., New Haven Conn.
Hall & Brown, 1857-1863 N. B'way, St. Louis, Mo.
Hallyburton, J. L., 119 Craven st., Phila., Pa.
Harrington, E., Son & Co., N. 15th st. and Penna. av., Phila., Pa.
Harris, P. D., Shelbyville, Ind.
Heald, S. & Son, Barre, M.
Heath, W. A., Binghampton, N. Y.
Henry, Peter, Carr & Main, St. Louis, Mo.
Herrick, W., Northampton, Mass.
Hill, Wm. E. & Co., Kalamazoo, Mich.
Hinckley & Egery Iron Co., Bangor, Me.
Hinz, C., 312 W. 41st st., N. Y.
Hobbs, Gordon & Co., Concord, N. H.
Hodgkins, C. & Sons, Marlboro, N. H.
Holmes, E. & B., 59 Chicago st., Buffalo, N. Y.
Houston, Levi, Montgomery, Pa.
Humphrey Machine Co., Keene, N. H.
Huntingdon Machine Works, 135-137 Halsey st., Newark, N. J.
Huyett & Smith Mfg. Co., Russel and D. C. H. & M. Ry., Detroit, Mich.
Indianapolis Mfg. & Supply Co., Indianapolis Ind.
Jackoboice, Jos., Grand Rapids, Mich.
James, W. A. & Co., 275 S. Canal st., Chicago, Ill.
Jenks, James & Co., 48-54 Randolph st., Detroit, Mich.
Kay Bros. & Co., 121 Water st., Pitt'g., Pa.
Kennedy, D., 315 3d av., S. Minneapolis, Minn.
Kerrick, J. H., 2d av., nr. 5th st., Minneapolis, Minn.
Kinnard & Haines, 224 Washington av., S. Minneapolis, Minn.
Kirkwood, A. J. & Co., 12 S. Canal st., Chicago, Ill.
Lane & Bodley Co., John st., c. Water, Cin., O.
Lane Mfg. Co., Montpelier, Vt.
Lee, H. A., 164 Union st., Worcester, M.
Lidey, M. B., Hedenberg Works, Newark, N. J.
Link-Belt Machinery Co., 49 Dey st., N. Y., and Chicago and Minneapolis.
Lockyear, Geo. H., Minneapolis, Minn.
London, Berry & Orton, 22d st., ab. Arch, Phila., Pa.

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McFarlan & Nottingham Co., 220 W. 2d st., Cin., O.
McIntosh & Brown, 59 Ann st., N. Y.
McIvers Bros. & Co., Worcester, M.
McKechnie & Bertram, Dundas, Ont.
Mackinnon, J. A., Mach. Co., 22 Warren st., N. Y.
McKnight, L. G. & Co., West Gardner, M.
McNish, A. M. & Son, 516 Liberty av., Pitt'g., Pa.
Marston, J. M. & Co., 36 Appleton st., Boston, M.
Mason & Bell, 345 Produce Exchange, N. Y.
Merriman, A. H., Meriden, Conn.
Merritt, J. E. Machinery Co., Lockport, N. Y.
Michel's, J., Machine Works, Fort and Beaubien sts., Detroit, Mich.
Millspaugh Bros., Williamsport, Pa.
Mosley, Jerome S., Syracuse, N. Y.
Murray, D. J., Mfg. Co., Wausau, Wis.
Myers, F., 625 E. 15th st., N. Y.
Nash & Smith, 15 Alling st., Newark, N. J.
Nason, Jas. S., 109 Liberty st., N. Y.
N. Y. Lumber & Wood Working Co., 134th and Alexander ave., N. Y.
Newhall, W., 386 Hopkins st., Cincinnati, O.
Nichols, Wm. E. & Co., Baldwinsville, M.
North Star Iron Works, Minneapolis, Minn.
Novelty Iron Works, Dubuque, Ia.
Orum, Morris L., 448 N. 12th st., Phila., Pa.
Packard, O. L., Milwaukee, Wis.
Page, Moses, South Jefferson, Me.
Parke & Lacy, 21-23 Fremont st., San Francisco, Cal.
Patterson, Callender & Co., Dayton, O.
Penney, J. W., Mechanic Falls, Me.
Pennington Machine Works, 85 E. Columbia st., Fort Wayne, Ind.
Perkins Machinery Co., Atlanta, Ga.
Perkins & Co., Grand Rapids, Mich.
Perry Machine Co., 160 Portland st., Boston, M.
Perry, J. L., Mfg. Co., Watertown, Wis.
Pettingill, C. F. &. Co., Amesbury, M.
Phœnix Mfg. Co., Eau Claire, Wis.
Peerless Mfg. Co., 17th and Magazine sts., Louisville, Ky.
Place, Geo., 120 Broadway, N. Y. **81.**
Porter, C. A. & A. D., Front st., Grand Rapids, Mich.
Power, L. & Co., 12 S. 23d st., Phila., Pa.
Pratt, I. H., 15 S. Water st., Cleveland, O.
Pratt & Whitney Co., 98 W. Wash'n, Chicago, Ill.
Pratt & Whitney Co., Hartford, Conn.
Preble Machine Works Co., 38 W. Monroe st., Chicago, Ill.
Pryibil, P., 467 W. 40th st., N. Y.
Purdy Machine Co., 65 Centre st., Cleveland, O.
Putnam Machine Co., Fitchburg, M.
Racine Hardware Mfg. Co., Racine, Wis.
Ramstad, Andrew, Meridian, Wis.
Richardson, H. A., Worcester, M.
Rix, A. W., Lebanon, N. H.
Robinson & Crossley, 155 River st., Cleveland, O.
Roberts, W. S. & Co., 717 N. 2d st., St. Louis, Mo.
Rodgers Iron Mfg. Co., Muskegon, Mich.
Rogers, C. B. & Co., 109 Liberty st., N. Y., and Norwich, Conn.
Rollstone Mach. Co., 65 Water st., Fitchburg, M.
Ross, J., 1443 Niagara st., Buffalo, N. Y.
Rowley & Hermance, Williamsport, Pa.
Rugg & Richardson, Worcester, M.
Rumsey, L. M., Mfg. Co., St. Louis, Mo.
Royle, John & Sons, Paterson, N. J.
Salem Iron Works, Salem, N. C.
Sellers, Wm. & Co., Phila., Pa.
Seneca Falls Mfg. Co., Seneca Falls, N. Y.
Seymour & Whitlock, 43 Lawrence st., Newark, N. J.
Schenck, H. B., Matteawan, N. Y.
Scioto Machine Works, Circleville, O.
Scranton Supply and Hardware Co., 131 Wyoming av., Scranton, Pa.
Scully, Smith & Co., Sharon Hill, Pa.
Shepard, H. L., 134 E. 2d st., Cincinnati, O.
Sherman, G. C., Alfred, N. Y.
Sherriff & Ashworth Machinery Co., 80 Water st., Pitt'g., Pa.
Shimer, Samuel J., Milton, Pa.
Smith, H. B., Machine Co., Smithville, N. J., and 925 Market st., Phila., Pa.
Smith, J. B., Sunapee, N. H.
Smith, Myers & Schnier, Cincinnati, O.
Sniggs & Co., 56 Mechanic st., Buffalo, N. Y.
Spilker, J. J., 48 Central av., Cincinnati, O.
Springer, Warren, 179 S. Canal st., Chicago, Ill.
Star Mach. Co., 198-200 Terrace st., Buffalo, N. Y.
Star Machine Works, Kokomo, Ind.
Standard Machinery Co., Bay City, Mich.
Stearns Mfg. Co., 29 Spear st., San Francisco, Cal., and Erie, Pa.
Steptoi, J. & Co., 214 W. 2d st., Cincinnati, O.
Stow Flexible Shaft Co., Phila., Pa. **26.**
Stowell, J. A., Leominster, M.
Strange's Machine Works, Taunton, M.
Streeter, Alvin, Winchendon, M.
Swartwout, L. B., Three Rivers, Mich. **13.**
Taylor, Stiles & Co., Riegelsville, N. J.
Teal, Wm., 225 Mill st., Rochester, N. Y.
Thompson, H., 89 Exchange st., Worcester, M.
Thompson & Gross, St. Johnsbury, Vt.
Thompson Mfg. Co., Lancaster, N. H.
Tompkins, C. R. Co., (The), Rochester, N. Y.
Torrent, John, Muskegon. Mich.
Towsley, John T., 92 E. 2d st., Cincinnati, O.
Trevar & Co., Lockport, N. Y.
Tucker, W. J., 3 Spear st., San Francisco, Cal.
Ulrich & Allison, Rock Falls, Ill.
Van Buren & Ryder, Carey, O.
Walker Bros., 73 Laurel st., Phila., Pa.
Walker, E. A., 75 Laurel st., Phila., Pa.
Waterville Iron Works, Waterville, Me.
Waymoth, A. D. & Co., Fitchburg, M.
Webber & Philbrick, Waterville, Me.
Wickes Bros., East Saginaw, Mich.
Wiggs & Bacon Co., Birmingham, Ala.
Wiggins, F. B. & Co., East Saginaw, Mich.
Wilder, Chas. W., 48 Water st., Fitchburg, M.
Wilkin Mfg. Co., Milwaukee, Wis.
Williamsport Machine Co., (Ltd.), 3d and West sts., Williamsport, Pa.
Wilson Mfg. Co, New London, Conn.
Winship Mfg. Co., Racine, Wis.
Witherby, Rugg & Richardson, 26 Salisbury st., Worcester, M.
White, John A., 31 S. Main st., Concord, N. H.
Whitney, Baxter D., Winchendon, M.
Woods, S. A., Machine Co., 172 High st., Boston, M.; 91 Liberty st., N. Y., and 61 S. Canal st., Chicago, Ill.
Woodward Machine Co., Lowell, M.
Woodward, W. A., Lowell, M.
Woodwell, W. E. & John, 632 Smithfield st., Pitt'g., Pa.
Wormer, G. S. & Sons, 55-59 Woodbridge st., Detroit, Mich.
Wright, Fred. F., Canton, Ill.
Wright, L., Jr., 9 Alling st., Newark, N. J.

Machinists.

Adams Bros., 31 S. Canal st., Chicago, Ill.
Angell, E. F. & Co., 87 S. Franklin st., Chicago, Ill.
Aronson, Frank, 87 5th av., Chicago, Ill.
Avery & Burton, 42 S. Clinton st., Chicago, Ill.
Bergbom & Roberg, 52 S. Franklin st., Chicago, Ill.
Boland, U. J., 204 S. Clinton st., Chicago, Ill.
Boston Blower Co., 276 Franklin st., Boston, M.
Charbonnean, J., 68 W. Washington st., Chicago, Ill.
Chicago Die & Machine Works, 87-91 W. Lake st., Chicago, Ill.
Chicago Gear Cutting & Machine Works, 84 S. Market st., (room 23), Chicago, Ill.
Chicago Safety Steam Engine Co., 72 W. Washington st., Chicago, Ill.
Clacher, Wm. B., 80 S. Market st., (room 8), Chicago, Ill.
Clausing, August, 5 Mohawk st., Chicago, Ill.
Colborne, Oliver, 70 W. Monroe st., Chicago, Ill.
Cook & Cluck, 262 Michigan st., Chicago, Ill.
Cooper, J. E. & Co., 12-14 S. Canal st., Chicago, Ill. **58.**
Crary, C. W. & Son, 35 E. Indiana st., Chicago, Ill.
Delano, E. A., 53 S. Jefferson st., Chicago, Ill.
Eagle Iron Works, 252 Woodbridge st., W. Detroit, Mich.
Eaton, Thomas W., 64 W. Lake st., Chicago, Ill.
Elmes, Chas. F., Fulton st., N. E. c. Jefferson, Chicago, Ill.

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Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. **57.**
Excelsior Machine & Iron Works, 341 S. Canal st., Chicago, Ill.
Fitchburg Machine Works, 59 S. Canal st., Chicago, Ill.
Furness Bros., 30 N. Desplaines st., Chicago, Ill.
Gallaher & Carlson, 245 E. Lake st., Chicago, Ill.
Ganschow, Wm., 31 S. Canal st., Chicago, Ill.
Gibson, A. M. & D., 28 W. Washington st., Chicago, Ill.
Glader, W., 164 S. Clinton st., Chicago, Ill.
Grun, Gustav, 80 S. Market st., (room 9), Chicago, Ill.
Gruendel, George, 31 S. Canal st., Chicago, Ill.
Gubbins, John, 343 S. Canal st., Chicago, Ill.
Halladay, J. C., 138 W. Lake st., Chicago, Ill.
Hansen & Amundsen, 49 W. Lake st., Chicago, Ill.
Hanson, James P., 259 E. Randolph st., Chicago, Ill.
Hartt Mfg. Co., 13 N. Jefferson st., Chicago, Ill.
Helmold, J. F. & Bro., 259 E. Randolph st., (room 26), Chicago, Ill.
Hill, C. C., 84 S. Market st., Chicago, Ill.
Horn, Adolph, 659 Wells st., Chicago, Ill.
Humberstone, A. J., 61 S. Canal st., Chicago, Ill.
Humphrey, Wm., 247 E. Division st., Chicago, Ill.
James & Rees, 311 W. Lake st., Chicago, Ill.
Johnson, John S., 40 Bismark ct., Chicago, Ill.
Kaestner, Chas. & Co., 303-311 S. Canal st., Chicago, Ill.
Lange, Henry C., 29 S. Water st., Chicago, Ill.
Lloyd, Geo. E., 70 W. Monroe st., Chicago, Ill.
Loff & Stoelling, 11-13 S. Canal st., Chicago, Ill.
Lunde, P., 175 W. Chicago av., Chicago, Ill.
McAllister, James, 207 S. Canal St., Chicago, Ill.
McGregor, W. & Co., 53-55 S. Clinton st., Chicago, Ill.
Malmgren, C. O., 261 E. Randolph st., Chicago, Ill.
Melichar & Schindler, 21st st., nr. Loomis, Chicago, Ill,
Monighan, John, 65 S. Canal st., Chicago, Ill.
Murling & Morf, 52 Michigan st., Chicago, Ill.
Nelson & Erickson, 34 W. Monroe st., Chicago, Ill.
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Nieman, August, 279 E. Division st., Chicago, Ill.
Nordstrom, A., 259-261 E. Randolph st., Chicago. Ill.
Olsen & Tilgner, La Salle av., c. Indiana st., Chicago, Ill.
Ostrander, J. W., 77 E. Jackson st., Chicago, Ill.
Paulsen, Theodore C., 82 S. Market (room 17), Chicago, Ill.
Peacock, E. P., 143 S. Clinton st., Chicago, Ill.
Peirce, A. H. & Co., 41 E. Indiana st., Chicago, Ill.
Perkins, T. G. & Co., 122-124 S. Jefferson st., Chicago, Ill.
Pope & Pringle, 287 S. Canal st., Chicago, Ill.
Prouty, Enoch, r. 84 S. Market st., Chicago, Ill.
Rockwood, Newcomb & Co., 190 S. Penn st., Indianapolis, Ind.
Rosback, F. P. & Co., 224-226 E. Washington st., (room 6), Chicago, Ill.
Roth, McMahon Co., 115 S. Clinton st., Chicago, Ill.
Rowe & Hutford, 77 E. Jackson st., Chicago, Ill.
Rush, Albert, 112 E. Randolph st., (room 6), Chicago, Ill.
Schnitzer, Wm., 276 S. Franklin st., Chicago, Ill.
Schombel, Herman, 255 Larrabee st., Chicago, Ill.
Schmpuhl, E. & Co., 31 S. Canal st., Chicago, Ill.
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Severin, W. & Emrath, 88 5th av., Chicago, Ill.
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Smith, Wm., 401 5th av., Chicago, Ill.
Spearin, Chancey, 126 S. Jefferson st., Chicago, Ill.
Stenberg, John A. & Co., 35 S. Canal st., Chicago, Ill.
Struad, Louis, 93 Wilson st., Chicago, Ill.
Swartwout, L. B., Three Rivers, Mich. **13.**
Unger, Wm., 72 W. Washington st., Chicago, Ill.
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Washington Foundry & Machine Shop, 13 N. Jefferson st., Chicago, Ill.
White, S. K., 86-88 S. Market st., Chicago, Ill.
Wood, Morris & Sons, 31 S. Canal st., Chicago, Ill.
Wrigley, Thomas, 85 5th av., Chicago, Ill.
Zoeller & Schmid, 15-17 S. Canal st., Chicago, Ill.

Mahogany.

Avilés Bros., 381 South st., N. Y.
Albro, E. D. & Co., 685 W. 6th st., Cincinnati, O.
Bearse, Owen & Son, 387 Albany st., Boston, M.
Carr, John F., 543 W. 23d st., N. Y.
Constantine & Co., 220 Lewis st., N. Y.
Copcutt, J. & Co., 440 Washington st., N. Y.
Daniels & Co., 202 Centre st., N. Y.
Dannat & Pell, ft. Broome st., East River, N. Y.
Delatour, John A., 176 Centre st., N. Y.
Goldsmith, F. L., 19 Chardon st., Boston, M.
Graham, John R., Jr., c. 11th av. and 30th st., N. Y.
Hagemeyer, G., ft. E. 11th st., N. Y.
Hatch & Keith, Canalport av. and 21st st., Chicago, Ill.
Hayden Bros., 22d st., c. Jefferson, Chicago, Ill.
Hirsch, L. & Bros., 21 Charleston st., Boston, M.
Holt & Bugbee, 173 Friend st., Boston, M.
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Martin & Barriss, 130 Central Way, Cleveland, O. **51.**
Monteath, John H., 133-135 Centre st., N. Y.
Ogden & Co., 392 Washington st., N. Y.
Palmer, Parker & Co., 133 Portland st., Boston, M.
Parker & Page, 24 Canal st., Boston, M.
Rayner, J., 283-289 E. 20th st., Chicago, Ill.
Rayner, J., ft. E. Houston st., E. R., N. Y.
Read, G. W. & Co., 186 Lewis st., N. Y.
Rosenheim, M., 806 E. 61st st., N. Y.
Sleeper, J. C. & Co., 53 Portland st., Boston, M.
Smith, J. Willard, 157-159 S. Canal st., Chicago, Ill.
Smith, J. E. & Son, 11th av., c. W. 26th st., N. Y.
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Waterbury, J. N., 142 Mangin st., N. Y.
Williams, Ichabod T., 221 11th av., N. Y.
Woods, John M. & Co., 70-72 Canal st, Boston, M.

Mallets.

Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Bliss, R., Mfg. Co., Pawtucket, R. I.
Boston & Lockport Block Co., Boston, M., and Lockport, N. Y. **90.**
Briggs Iron & Tool Co., Findlay, O.
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Brown & Wales, Burton, O.
Casper, Adolph, Mascoutah, Ill.
Cundey, E., Wayne June, Phila., Pa.
Hanschildt, J. H., 456 E. Houston st., N. Y.
Holbrook, A. & C. W., 78 N. Main st., Providence, R. I.
Johnson, Wm., Newark, N. J.
Kelsey, Horatio, Clinton, Conn.
New England Awl & Needle Co., W. Medway, M.
New York Mallet & Handle Works, 456 E. Houston st., N. Y.
Redlick Mfg. Co., 375-377 N. Clark st., Chicago, Ill.
Rice, Geo. F., Worcester, M.
Ripley Mfg. Co., Unionville, Conn.
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Sommer's, John, Son, 8-12 Pearl st., Newark, N. J.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Union Hardware Co., Torrington, Conn.
U. S. Bung Mfg. Co., 291 1st st., B'klyn, E. D., N. Y.

Map and Chart Publishers.

Adams & Co., 59 Beekman st., N. Y.
Baldwin, M. G., 23 Park Row, N. Y.
Beers, Ellis & Co., 36 Vesey st., N. Y.

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Britton & Rey, Com'l st., c. Leidesdorff, San Francisco, Cal.
Calvert Lithographing Co., Larned st., c. Shelby, Detroit, Mich.
Cincinnati Map Depot, 36 Emery Arcade, Cincinnati, O.
Colton, G. W. & C. B. & Co., 182 William st., N. Y.
Cram, G. F., 264 Wabash av., Chicago, Ill.
Cram, G. F., 420 N. 3d st., St. Louis, Mo.
Damreli & Upham, 283 Wash'n. st., Boston, M.
Davy Map & Atlas Co., 171 La Salle st., Chicago, Ill.
Decatur Printing Co., Decatur, Ill.
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Dripps, M., 113 Fulton st., N. Y.
Eggert's, D. Sons, 74 Wall st., N. Y.
Everts & Kirk, 54 N. 6th st., Phila., Pa.
Field, M., 400 Walnut st., Phila., Pa.
Findlay, H. D. & Co., 56 Reade st., N. Y.
Folger, L. B., Cincinnati, O.
Forbes Lithographic Mfg. Co., 181 Devonshire st., Boston, M.
Frey, C., 310 Callowhill st., Phila., Pa.
Gamble, W. H., 628 Chestnut st., Phila., Pa.
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Gray, O. W. & Son, 56 N. 4th st., Phila., Pa.
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Harris, F. J. & Co., 407 Arch st., Phila., Pa.
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Martenet, S. J., 13 Lexington st., Balt., Md.
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Mœssinger, G., 5th st., c. Walnut st., Cincinnati, O.
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Noll, E. P. & Co., 17 N. 6th st., Phila., Pa.
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Railway Map & Pub. Co., 84 Warren st., N. Y.
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St. Paul Lithographic, Engraving and Publishing Co., St. Paul, Minn.
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Sanborn Map & Pub. Co., 106 Leidesdorff st., San Francisco, Cal., and 171 La Salle st., Chicago, Ill.
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Smith, E. A. & Co., 20 S. 6th st., Phila., Pa.
Snyder, L. M. & Co., 79 Dearborn st., Chicago, Ill.
Spaulding, J. R. & Co., 106 Court st., Boston, M.
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Steiger, E. & Co., 25 Park pl., N. Y.
Struthers, Servoss & Co., 24-34 New Chambers st., N. Y.
Thaxter, S. & Son, 125 State st., Boston, M.
Tunison, Henry C., 497 Van Buren st., Chicago, Ill., and 97 E. 5th st., Cincinnati, O.
Union School Furniture Co., 178 Wabash av., Chicago, Ill., and Battle Creek, Mich.
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Von Rosenberg, L., 35 Broadway, N. Y.
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Warwick & Costello, St. Paul, Minn.
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Marqueterie.

Bernard, John, 47 Washington sq., N. Y.
Hasse, Jacob, 119 Wooster st., N. Y.
Herting, W. & Son, 185 Elizabeth, N. Y.
Meyer, Frederick, 45 E. Houston st., N. Y.
Mohr, Frederick, 177 Thompson st., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Chas. W. Spurr Co., 35 Bedford st., Boston, M.

Mast Hoops.

Dubnar, J. A. & Co., Northville, Mich.
Hicks, Chas. N., 175 Lewis st., N. Y.
N. Y. Boat Oar Co., (The), 69 West st., N. Y.
Page, E. W. Co., 69 West st., N. Y.

Masts.

Andrews, Moses L., Gloucester, M.
Johnson & Howland, New Bedford, M.
Lunt, Edw. W., Newburyport, M.
Rushton, J. H., Canton, N. Y.
Ryder & Smith, New Bedford, M.

Mats—Cocoa Car.

Lynn & Pettit, Phila., Pa.

Matting—Electric.

Applegate, S. S., Camden, N. J.
Applegate Electric Floor Mat Mfg. Co., 35-37 Market st., Camden, N. J.
Brown & Brown, 106 Liberty st., N. Y.
Electric Gas Lighting Co., 35 Arch st., Boston, M.

Mats—Folding Car.

Beadle, Edward, 1193 Broadway, N. Y. 73.
Sloane, W. & J., 19th st., and Broadway, N. Y.
Warneck & Toffler, 211 E. 22d st., N. Y.

Mats—Rubber and Perforated Rubber.

Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Comb. Roll & Rubber Co., 38 Park Row, N. Y.
Gutta Percha & Rubber Mfg. Co., 35 Warren st., c. Church, N. Y.
Janney & Congdon, 8 N. Charles st., Balt., Md.
Mineralized Rubber Co., 18 Cliff st., N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. v.
Trenton Rubber Co., Trenton, N. J.

Mats—Steel Wire.

Barnum, E. T., Detroit, Mich.
Hartman Steel Co., (Ltd.), Beaver Falls, Pa., and Pitt'g, Pa.
N. Y. Steel Wire Mat Co., 83 Reade st., N. Y.
Wire Goods Co., Worcester, M.

Mathematical, Nautical and Philosophical Instruments.

Abbott, A. H. & Co., 50 Madison st., Chicago, Ill.
Albrecht, H. & Son, 62 Fulton st., N. Y.
Alteneder, T., 355 N. 10th st., Phila., Pa.
Am. Novelty Works, Worcester, M.
Andrews, R. E., 3 Niagara st., Buffalo, N. Y.
Baker Oil Compass Co., 99 Commercial st., Boston, M.
Bancroft, A. L. & Co., 712 Market st., San Francisco, Cal.
Barry, J., 62 Fulton st., N. Y.
Batchelder, J. W., 207 Main st., Buffalo, N. Y.
Beck, A., 40 Fulton st., N. Y.
Beckman, L., Toledo, O.
Benjamin, E. B. Mfg. Co., 6 Barclay st., N. Y.
Black, L. & Co., 77 Woodward av., Detroit, Mich.
Bliss, J. & Co., 128 Front st., N. Y.
Boeringer, P. & Son, St. Paul, Minn.
Brandis, F. E., 55 Fulton st., N. Y.
Brod & Strassburger, 335 Bush st., San Francisco, Cal.
Buff & Berger, 9 Province ct., Boston, M.

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Dunham, C. N., 724 Chestnut st., Phila., Pa.
Eckel, F., 16 Burling Slip, N. Y.
Educational Supply Co., 6 Hamilton pl., Boston, M.
Eggerts, D. Sons, 74 Wall st., N. Y.
Emmerich, Fred J. & Son, 43 Barclay st., N. Y.
Erker, A. P., 204 N. Broadway, St. Louis, Mo.
Ewing, C. G., 120 Sutter st., San Francisco, Cal.
Farley, C. H., Portland, Me.
Fauth & Co., 132 Maryland av., Wash'n., D. C.
Frost & Adams, 37 Cornhill st., Boston, M.
Gardam, Wm. & Sons, 96 John st., N. Y.
Gassner, Henry, 127 Bleecker st., N. Y.
Gendar, F. V. & Sons, 87 Fulton st., N. Y.
Gender, F. V. & Son, 72 Ryerson st., Brooklyn, N. Y.
Gray, Robert D., 259 W. 27th st., N. Y.
Green, Henry J., 771 Broadway, N. Y.
Gregg, Wm. T., 25 John st., N. Y.
Gurley, W. & L. E., 514 Fulton st., Troy, N. Y.
Hastings, F. C. & Co., 54 Cornhill st., Boston, M.
Hawkins & Palmer, 5th st., c. Race, Cin., O.
Heller & Brightly, Ridge av., c. Spring Garden st., Phila., Pa.
Hempler, H. H., 453 Penna. av., Wash'n., D. C.
Hess, C., 519 Kearny st., San Francisco, Cal.
Hoffman, C. A., Minneapolis, Minn.
Hoffman, Louis C., 12 Whitehall st., N. Y.
Hohmann & Maurer, 90 Fulton st., N. Y.
Holle, G., 49 S. 17th st., Phila., Pa.
Holzer, Nicholas R., 112 John st., N. Y.
Hudelstom, J. S. T., 328 Wash'n. st., Boston, M.
Hutchinson, C. C., 126 Commercial st., Boston, M.
Kahn, B. & Son, 32 Maiden Lane, N. Y.
Kahn, H. & Co., 212 Kearny st., San Francisco, Cal.
Kelley, J. S., New Bedford, M.
Keuffel & Esser, 127 Fulton st., N. Y.
Knox, H. M., 107 S. 8th st., Phila., Pa.
Knox & Shain, 107 S. 8th st., Phila., Pa.
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Kratzenstein, B., 157 State st., Chicago, Ill.
Kroedel, F., 52 Nassau st., N. Y.
Kubel, E. P., 328 1st st., Washington, D. C.
Langsdorff, Gottlieb, 209 E. 19th st., N. Y.
Lietz & Mauerhan, 411 Clay st., San Francisco, Cal.
Lowe, N. M., 103 Court st., Boston, M.
McAllister, O., 1626 Chestnut st., Phila., Pa.
Manasse, I., 88 Madison st., Chicago, Ill.
Merrill's, R. Sons, 179 Water st., N. Y.
Meyer, C. W., 857 4th av., N. Y.
Moody, J. E., 51 Commercial st., Boston, M.
Muller, C., 135 Montgomery st., San Francisco, Cal.
Nims, H. B. & Co., 9-10 Cannon Place, Troy, N. Y.
Oakes, John, 156 Maiden Lane, N. Y.
Osborn, A. T. & Co., 113 Seneca st., Cleveland, O.
Œschlager Bros., 88 Fulton st., N. Y.
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Pfister, H., 119 W. 5th st., Cincinnati, O.
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Snow & Co., 12 Post st., San Francisco, Cal.
Soltmann, E. G., 119 Fulton st., N. Y.
Stackpole & Bro., 41 Fulton st., N. Y.
Stokes, T., 57 W. 3d st., Cin., O.
Tagliabue, C. J., 53 Fulton st., N. Y.
Tagliabue, Ginseppe, 302 Pearl st., N. Y.
Tagliabue, John, 66 Fulton st., N. Y.
Tennent, T., 18 Market st., San Francisco, Cal.
Thaxter, S. & Son, 125 State st., Boston, M.
Ullenbruch, J. H., 274 Main st., Buffalo, N. Y.
Vivien, J. & Co., 1645 N. 10th st., Phila., Pa.
Wadsworth, Howland & Co., 82-84 Wash'n. st., Boston, M.
Wagner, F., 41 W. 5th st., Cin., O.
Wareham, R., 402 Locust st., Phila., Pa.
Waseweller, C., 167 William st., N. Y.
Watts Bros., 178 Wash'n. st., Boston, M.
Weller, D., Columbus, O.
Weinhagen, H., 24 N. William st., N. Y.
West, R. C., Akron, O.
Williams & Brown, 10th st., c. Chestnut, Phila., Pa.
Wollenweber, Aug., 83 Park Row, N. Y.
Woolman, Geo. S., 116 Fulton st., N. Y. 19.
Young & Sons, 43 N. 7th st., Phila., Pa. 13.
Zeuschner, E. L., 189 Vine st., Cin., O.

Mattresses—Life Saving S. S.

Boston Yacht Agency, 43 Milk st., Boston, M.

Mattresses (Spring) for S. S. Upper and Lower Berths.

Bushnell, E. L. & Sons, Poughkeepsie, N. Y.
Bergin, M., St. Louis, Mo.
David & Brazill, 718 N. 6th st., St. Louis, Mo.
Keiser & Co., Jacob, 204 S. 4th st., St. Louis, Mo.

Metals—Anti-Friction.

Ajax Metal Co., (The), 2040 N. 10th st., Phila., Pa.
Carbon Bronze Co., 38 Water st., Pitt'g., Pa.
Damascus Bronze Co., Pitt'g., Pa.
Deoxidized Metal Co., Bridgeport, Conn.
Diamond Anti-Friction Metal Co., 32 S. Clinton st., Chicago, Ill.
Du Plaine, E. A. C., 64 S. Canal st., Chicago, Ill.
Fullmer, A. J. & Co., Camden, N. J.
Hoyt Metal Co., St. Louis, Mo.
Jordon, F., 200 B'way, N. Y.
Loring, Fred. L., 41 Dey st., N. Y., and 143 Broad st., Boston, M.
Magnolia Anti-Friction Metal Co., 102 Chambers st., N. Y.
Mansfield & Co., (Ltd.), 49 Water st., Pitt'g., Pa.
Merchant & Co., 9 Burling Slip, N. Y.
Miller, Chas. B., 541 W. 32d st., N. Y.
N. Y. Smelting & Refining Co., Jane and West sts., N. Y.
Philadelphia Smelting Works, 455-457 N. 12th st., Phila., Pa.
Phosphor Bronze Smelting Co., (Ltd.), (The), 512 Arch st., Phila., Pa.
Reeves, Paul S., Phila., Pa.
St. Paul Brass Works, St. Paul, Minn.
Springfield Brass Co., (The), 80-84 Limestone st., Springfield, O.
Stewart & Mattson Mfg. Co., (The), 2042 N. 10th st., Phila., Pa.
Thayer Mfg. Co., 244 S. Clark st., Chicago, Ill.
Theberath, Chas. M., 10 Ward st., Newark, N. J. 56.
Tubal Smelting Works, 762 S. Broad st., Phila., Pa.
Williams, E. A. & Son, 109 Plymouth st., Jersey City, N. J. x.

Metal—Babbitt.

Ajax Metal Co., (The), 2040 N. 10th st., Phila., Pa.
Atkins, J. C. & Co., Indianapolis, Ind.
Atlas Bronze & Tuyere Co., 2829 Smallman st., Pitt'g., Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pitt'g., Pa.
Baker, Jos. W., 821 N. 2d st., Phila., Pa.
Blatchford, E. W. & Co., Chicago, Ill.
Brooklyn Smelting & Refining Works, Driggs st., bet. Union av. and Lorimer st., Brooklyn E. D., N. Y.
Bruce & Cook, 188 Water st., N. Y.
Bullock, A. H., Elyria, O.
Colwell Lead Co., 63 Centre st., N. Y.
Crown Smelting Co., Chester, Pa.
Delaware Metal Refinery, 8th st. and Washington av., Phila., Pa.
Deoxidized Metal Co., Bridgeport, Conn.
Du Plaine, E. A. C., 64 S. Canal st., Chicago, Ill.

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Keystone Smelting Co., 33d st. and A. V. R. R., Pitt'g., Pa.
Mansfield & Co., (Ltd.), 57 1st av., Pitt'g., Pa.
Martin, G. W., 482 Woodbridge av., Detroit, Mich.
Merchant & Co.,9 Burling Slip, N. Y., and Phila., Pa.
Montgomery & Co., 105 Fulton st., N. Y.
More, Jones & Co., 1608 N. 8th st., St. Louis, Mo.
Mowry & Phillips, 120-134 Cross st., Boston, M.
New York Smelting & Refining Co., Jane and West sts., N. Y.
Philadelphia Smelting Works, 455-457 N. 12th st., Phila., Pa.
Phillips, F. R., Phila., Pa.
Pittsburgh Supply Co., (Ltd.), 105 Wood st., Pitt'g., Pa.
Pittsburgh White Metal Co., 285 Penna. av., Allegheny, Pa.
Reeves, Paul S., 762 S. Broad st., Phila., Pa.
Roberts, S. D., 217 Water st., N. Y.
St. Paul Brass Works, 8th and Minnesota sts., St. Paul, Minn.
Shaw, Luther & Son, 29 Jackson st., Worcester, M.
Smith, Alfred L., 163 Worthen st., Lowell, M.
Thayer Mfg. Co., 241 Greenfield av., Milwaukee, Wis.
Van Duzen & Tift, 102-104 E. 2d st., Cincinnati, O. 57.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. x.
Wilson-Snyder Mfg. Co., 51 Water st., Pitt'g., Pa.
Yeaton & Harris, 260 S. 5th st., Phila., Pa.

Brokers—Metal.

Adams, M. H., 71 Wall st., N. Y.
Am. Metal Co., 80 Wall st., N. Y.
Barnard, Geo. A., 5 Beekman st., N. Y.
Behr & Steiner, 12 Cliff st., N. Y.
Benton, Chas. S., 181 Pearl st., N. Y.
Bunting Bros., 116 William st., N. Y.
Byrne, Edw. F., 54 Cliff st., N. Y.
Byrne, James & Son, 104 John st., N. Y.
Caswell, Edw. A., 109 John st., N. Y.
Crane, Henry P., 117 John st., N. Y.
Crane, U. O. & Co., 74 Wall st., N. Y.
Dukerson, Van Dusen & Co., 29 Cliff st., N. Y.
Evans, Geo. A., 40 Wall st., N. Y.
Fearing, Wm. S., 100 Chambers st., N. Y.
Fisher, Eugene A., 115 B'way, N. Y.
Goldsmith, Phillip, 5 Beekman st., N. Y.
Goodwin, Robert N., 104 John st., N. Y.
Graves, O. W. & Co., 21 Cliff st., N. Y.
Hammond & Lobdell, 12 Cliff st., N. Y.
Hartley, Chas. A., 5 Beekman st., N. Y.
Hazard, Theophilus D., 204 Pearl st., N. Y.
Heyne, F. W. & Bro., 13 William st., N. Y.
Houston, D. & Co., 22 Platt st., N. Y.
Jones, Geo. W., 56 Wall st., N. Y.
Lansing, Edwin B., 89 Fulton st., N. Y.
Mendel, Samuel, 117 John st., N. Y.
Naylor & Co., 99 John st., N. Y.
Nissen, George, 22 Burling Slip, N. Y.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Pope's, Thomas J. Sons & Co., 292 Pearl st., N. Y.
Raht, Charles, 85 John st., N. Y.
Rice, Frank M., 24 Cliff st., N. Y.
Russell, W. I. & Co., 2 Burling Slip, N. Y.
Trench Chas. S. & Co., 54 Cliff st., N. Y.
Weber, C. W. B., 81 New st., N. Y.
Western Agency, (Ltd.), 81 New st., N. Y.
White, Edw. P. & Co., 4 Burling Slip, N. Y.
Wood, Geo. R., 56 New st., N. Y.

Metal—Merchants.

Ackerman, J. H. & Co., 249 Pearl st., N. Y.
Adams, M. H., 71 Wall st., N. Y.
Aitchison, Robt., 76 E. Van Buren, Chicago, Ill.
Anderson, B. C. & Co., 84 Pike Slip, N. Y.
Aston, F. S., 230 Java st., Brooklyn, N. Y.
Atwater, J. C., 6 Warren st., N. Y.
Atwood, E. S., 242 South st., N. Y.
Austin, F. B. & Co., 94 North st., Boston, M.
Bailey, Farrel & Co., 619 Smithfield st., Pitt'g., Pa.
Baker, J. W., 821 N. 2d st., Phila., Pa.
Barnard, G. A., 5 Beekman st., N. Y.
Barry, C., New London, Conn.
Barstow, W. J., 83 Maiden Lane, N. Y.
Bayliss, J. E., 241 State st., Hartford, Conn.
Behr & Steiner, 12 Cliff st., N. Y.
Benton, C. S., 117 John st., N. Y.
Berling, D. & Son, 590 S. Canal st., Chicago, Ill.
Bingham, W. & Co., 146 Water st., Cleveland, O.
Bisbee, Williams & Co., 32 Merchants' Exchange, San Francisco, Cal.
Birmingham Patent Metallurgical Co., 40 Broadway, N. Y.
Blake, T. J. & Son, 40 Ferry st., Hartford, Conn.
Blaney, C. C., 123 Devonshire st., Boston, M.
Blatchford, E. W. & Co., 70 N. Clinton st., Chicago, Ill.
Blau, M., Dayton, Ohio.
Bleecker, Augustus & Son, 48 South st., N. Y.
Block, Pollak & Co., Wallace, bet. 52d and 53d sts., Chicago, Ill.
Block & Pollak, 3d st., c. Plum, Cincinnati, O.
Bonner, J., 109 Mulberry st., N. Y.
Bornholz & Co., 413-415 Pearl st., N. Y.
Boynton, G. A., 70 Wall st., N. Y.
Brandon, E., 67 William st., N. Y.
Bruce & Cook, 186-188 Water st., N. Y.
Brull, L. & Co., 88 Pike st., N. Y.
Bryant, J. H. & Bro., 61 Mich. st., Chicago, Ill.
Bussenius & Cunliffe, 1142 Wash'n. av., Phila., Pa.
Buxton, E. & Son, Worcester, M.
Byrne, E. F., 54 Cliff st., N. Y.
Byrne, J. & Son, 90 Beekman st., N. Y.
Carolan, Cory & Co., 117 California st., San Francisco, Cal.
Carpenter & Bartlett, 190 Front st., Hartford, Conn.
Carter, Edward & Son, Ansonia, Conn,
Caswell, E. A., 109 John st., N. Y.
Chicago Copper Refinery Co., 115 E. Monroe st., (room 35), Chicago, Ill.
Chicago Iron & Metal Co., 272-276 S. Clinton st., Chicago, Ill.
Cincinnati Lead Pipe & Sheet Lead Works, 21 E. 9th st., Cincinnati, O.
Cincinnati Smelting Works, 462 E. Front st., Cincinnati, O.
Clapp, E. H., 50 India st., Boston, M.
Clark & Ires, 13 Long whf., New Haven, Conn.
Cledhill & Co., 4-8 Union st., Bridgeport, Conn.
Clendenin Bros., 111 S. Gay st., Baltimore, Md.
Coddington, T. B. & Co., 27 Cliff st., N. Y.
Collins, H. E. & Co., 34 Lewis blk., Pitt'g., Pa.
Columbia Co., (The), Springfield, M.
Congdon, Carpenter & Co., 81 Canal st., Providence, R. I.
Cort, N. L. & Co., 245 Water, N. Y.
Corey, Moore & Co., 43 Crown st., New Haven, Conn.
Corwith, G., 46 Cliff st., N. Y.
Cotter, E., 363 Pearl st., N. Y.
Crane, H. P., 117 John st., N. Y.
Crocker Bros., 32 Cliff st., N. Y.
Crooke Smelting & Refining Co., 22 Burling Slip, N. Y.
Crowley, J. A., Fall River, M.
Crown Metal Perforating Co., (The), Collins st., c. Biddle, St. Louis, Mo.
Curley & Burchard, 104 Calyer st., Brooklyn, N. Y.
Daniel Bro., 1216 Vienna st., Phila., Pa.
Davenport, F. C., 82 North st., Boston, M.
Davis, C. K., Portland, Maine.
Davis, E. T. & Co., 50 Oliver st., Boston, M.
Davol, J. & Sons, 100 John st., N. Y.
Day, A. L., 20 Cliff st., N. Y.
Demilt, H. R. & Co., 238 Water st., N. Y.
Deoxidized Metal Co., (The), Railroad, c. West av., Bridgeport, Conn.

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Diamond Anti-Friction Metal Co., 34 S. Clinton st., Chicago, Ill.
Dickerson, Vandusen & Co., 29 Cliff st., N. Y.,
Doble, A., 13 Fremont st., San Francisco, Cal.
Donahue, R., Burlington, Iowa.
Donnelly, M. & Co., 134 Leroy st., N. Y.
Donovan, John, 69 Long whf., New Haven, Conn.
Duffy, J. S., Lyon st., opp. Depot, Bridgeport, Conn.
Dunham, Carrigan & Co., 17 Beale st., San Francisco, Cal.
Du Plaine, E. A. C., 64 S. Canal st., Chicago, Ill.
Ensworth, L. L., 104 Front st., Hartford, Conn.
Evans, G. A., 40 Wall st., N. Y.
Ewing, Mitchell & Co., 14 Wood st., Pitt'g., Pa.
Expanded Metal Co., Wabansia av., c. Howard st., Chicago, Ill.
Farrar, Simpson & Co., 128 North st., Boston, M.
Farregher, M., 1914 Montrose st., Phila., Pa.
Fay, W. L. & Co., Elyria, O.
Felt & Stone, Garden, c. C. & P. R. R., Cleveland, O.
Fines, N., 149 Fulton st., Boston, M.
Foster, Wm. T. & Co., 178 Commercial st., Boston, M.
Fox, John, 160 Broadway, N. Y.
Frankland, C. E., 160 S. Water st., Providence, R. I.
Freeborn, W. A. & Co., 254 South st., N. Y.
French, C. S. & Co., 89 Lake st., Chicago, Ill., 284 Pearl st., N. Y., 7 Post Office av., Balt., Md.
Fuller, Dana & Fitz, 110 North st., Boston, M.
Fuller, W. & Co., 111 S. Charles st., Balt., Md.
Fulton's, A. Son & Co., 91 First av, Pitt'g., Pa.
Garrett, F. R., 108 Cannon st., Bridgeport, Conn.
Garratt, W. T., 138 Fremont st., San Francisco, Cal.
Geiss & Co., 94 Wendell st., Chicago, Ill.
Gibbs, G. W. & Co., 35 Fremont st., San Francisco, Cal.
Gibson, Wetstein & Co., 137 Main st., Cincinnati, O.
Gilbert, S. H., 619 N. 24th st., Phila., Pa.
Gleason, J., 32 Marion st., N. Y.
Goldsmith, P., 5 Beekman st., N. Y.
Goodnow, Wm. D., 214 E. Randolph st., Chicago, Ill.,
Gordon & Stowe, 46 Franklin st., Norwich, Conn.
Graham, J. & Co., 205 Wooster st., New Haven, Conn.
Granular Metal Co., 166 Ruggles st., Boston, M.
Graves, O. W. & Co., 21 Cliff st., N. Y.
Gray, Shook & Co., Water st., c. Short, Pitt'g., Pa.
Greene, G. W. & B. F., 41st c A. N.R. R., Pitt'g., Pa.
Gregory & Thompson, 234 Lake st., Chicago, Ill.
Grilley, Wm., 5 Grand st., nr. S. Main, Waterbury, Conn.
Hachmeister, C., 48 Essex st., Newark, N. J.
Hammond & Lobdell, 12 Cliff st., N. Y.
Hannon, J., 233 Kent av., Brooklyn, N. Y.
Harmon, W. A., 17 Owego st., Boston, M.
Harper, G. P., Dayton, O.
Harrington & King Perforated Co., 224 N. Union st., Chicago, Ill.
Hart, Lucius & Co., 10 Burling Slip, N. Y.
Hart, Wm. R. & Co., 226 Walnut st., Phila., Pa.
Haskins & Montague, 309 Atlantic av., Boston, M.
Hazard, T. D, 204 Pearl st., N. Y.
Hendricks Bros., 49 Cliff st., N. Y.
Hey, Levi, 351 355 State st., Rochester, N. Y.
Heyne, F. W. & Bro., 13 William st., N. Y.
Hilb & Bauer, Front st., c. Ramsey, Cincinnati, O.
Higgins, J. H., 201 Washington st., Providence, R. I.
Hill, J. G., 19 Whitehall st., N. Y.
Hobbs, George E., 5-7 Union st., Bridgeport, Conn.
Hopkins, E. F., 104 John st., N. Y.
Hofmann Bros., 5th st., c. Bryant, San Francisco, Cal.
Holbrook, Merrill & Stetson, 225 Market st., San Francisco, Cal.
Holder & Herrick, 128 Milk st., Boston, M.
Hollenbeck & Tyler, Auburn, N. Y.
Holmes & Wessell Metal Co., 525 W. 24th st., N. Y.
Holz, S., Dayton, O.
Horton, Gilmore, McWilliams & Co., 172 Lake st., Chicago, Ill.
Housatonic Brass Co., 154 E. Lake st., (room 14), Chicago, Ill.
Houston, D. & Co., 22 Platt st., N. Y.
Howe & Co., 181-183 River st., Troy, N. Y.
Hoyt Metal Co., 70 Killy st., Boston, M.; 20 Cliff st., N. Y., and St. Louis, Mo.
Huenefeld, E. H., 25 E. 9th st., Cincinnati, O.
Hunter, S., 230 Middle st., Bridgeport, Conn.
Huntington, Hopkins & Co., Bush st., c. Market, San Francisco.
Huntley, C. H., 3424 Olive st., St. Louis, Mo.
Hussey, C. G. & Co., 49 5th av., Pitt'g., Pa.
Illinois Alloy Co., 43 Portland Bl'k., Chicago, Ill.
Ives, W. J., 50 New st., N. Y.
Jeffray, W., 204 California st., San Francisco, Cal.
Johnston, W. D., 113 Leidesdorf, San Francisco, Cal.
Jones, G. W., 56 Wall st., N. Y.
Jordan & Gottfried, 208 Canal st., N. Y.
Joseph, J. & Bros., 28 E. 2d st., Cincinnati, O.
Kahn Bros., 525 E. 19th st., N. Y.
Katz, S., 230 E. 9th st., N. Y.
Keen & Hagerty, 30 S. Calvert st., Balt., Md.
Kelly, R., 33 Bleecker st., N. Y.
Koehler & Co., Pike and Columbia sts., Pitt'g., Pa.
Kraft, Shock & Mechling, 18 Cliff st., N. Y.
Lane, W. E., 505 Kearny st., San Francisco, Cal.
Lansing, E. B., 89 Fulton st., N. Y.
Larin, J., 85 Silver st., Boston, M.
Lawson, F. H. & Co., 188-190 Main st., Cincinnati, O.
Leopold & Austrian, 72 S. Market st., Chicago, Ill.
Lewander & Co., 126 State st., Boston, M.
Lewisohn Brothers, 74 Beekman st., N. Y.
Lissberger, A. K., 256 Pearl st., N. Y.
Lockwood, Henry T., 56 Dearborn st., Chicago, Ill.
Loewenthal, A., 89 Chapmann st., Boston, M.
Loring, F. L., 41 Dey st., N. Y.
Lowenstein, B. & Bro., 4 Desbrosses st., N. Y.
Luckhardt, C. A. & Co., 23 Stevenson st., San Francisco, Cal.
Lyon, Conklin & Co., 31 Light st., Balt., Md.
McAndrews, James, 117 W. Lake st., Chicago, Ill.
McArdle, P. J., Church st., c. Arch, Albany, N. Y.
McCafferty, J. H. & Co., 147 Columbus av., Boston, M.
McCarthy, C., 469 River st., Troy, N. Y.
McCormick, J., 755 Atlantic av., Brooklyn, N. Y.
Mac Donald, N., 40 Wall st., N. Y.
McKenna, T. J., 120 Broadway, N. Y.
McKenna, S., 81 Silver st., Boston, M.
Mackie, James, 9-11-15 N. Front st., New Bedford, M.
Mansfield & Co., (Ltd.), 49 Water st., Pitt'g., Pa.
Matthews, C. W., 212 S. 3d st., Phila., Pa.
Measures, J., 141 Portland st., Boston, M.
Mendel, S., 117 John st., N. Y.
Merchant & Co., 9 Burling Slip, N. Y., 202 E. Lake st., Chicago, Ill.
Miller, C. B., 102 Chambers st., N. Y.
Moers, E. M., Worcester, M.
Montague, W. W. & Co., 309 Market st., San Francisco, Cal.
Montgomery & Co., 105 Fulton st., N. Y.
Morrow & Strong, 115 1st st., San Francisco, Cal.
Morton, C. H., Springfield, M.
More, Jones & Co., 1608 N. 8th st., St. Louis, Mo., 72 Wall st., N. Y.
Mowry & Phillips, 105-107 North st., Boston, M.
Moyer, H. P., 2619 Susquehanna av., Phila., Pa.
Naylor & Co., 99 John st., N. Y.
New Bedford Copper Co., New Bedford, M.
Newcomb, Hezekiah, 700 Green st., Phila., Pa.
Nellis, E. A., Winsted, Conn.
Newman, W. H. H. & Co., 76 Main st., Buffalo, N. Y.
New York Metallurgical Works, 104 Wash'n. st., N. Y.

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N. Y. Smelting and Refining Co., Jane and West sts., N. Y.
Nicholson, J. W., 1635 S. State st., Chicago, Ill.
Nicolai, G. J., 2237 Mendenhall st., Phila., Pa.
Nissen, G., 22 Burling Slip, N. Y.
Norris Bros., 415 Second st., Balt., Md.
Northwestern Iron and Metal Co., 272 S. Clinton st., Chicago, Ill.
O'Connell, P., 191 W. Front st., Cincinnati, O.
O Donnell T., Jr., ft. 27th st., Brooklyn, N. Y.
Oppenheimer, R. & Sons, 17 S. Frederick st., Balt., Md.
Pacific Metal works, 141 1st st., San Francisco, Cal.
Paige Bros., Akron, O.
Palmer Mfg. Co., 290 Pearl st., N. Y.
Park Bros. & Co., 243 E. Lake st., Chicago, Ill.
Parker, C. L. & Co., 201 S. Charles st., Balt., Md.
Parsons, J. & Co., 104-106 John st., N. Y.
Patent Metal Co., 609-619 N. 24th st., Phila., Pa.
Patterson, A. B., 6 South st., Balt., Md.
Peirson, C. L. & Co., 16 Exch. Pl., N. Y.
Perkins, F. E., Bros., 405 South st., N. Y.
Perkins, F. E., opp. P. W. & B. R. R. depot, India st., Providence, R. I.
Perry, W. H., 288 Dyer st., Providence, R. I.
Peterson, W. T., 10 Marion st., N. Y.
Phelps, Dodge & Co., 11-13 Cliff st., N. Y.
Plume & Atwood Mfg. Co., 115 Lake st., Chicago, Ill.
Pollack, A., 34 Pacific av., Chicago, Ill.
Pope, Thomas J. & Bro., 292 Pearl st., N. Y.
Pope, E. C., Wade Bldg., Cleveland, O.
Post & Co., Pearl st., c. Elm, Cincinnati, O.
Prahar & Shephard, 130 Pearl st., B'kln, N. Y.
Pratt, E. & Bro., 2 S. Charles st., Baltimore, Md.
Pratt, I. L. & Co., 50 Fulton st., Boston, M.
Price, T., 524 Sacramento, st., San Francisco, Cal.
Purchase, T. E., 394 Mulberry st., Newark, N. J.
Quincy, John W. & Co., 98 William st., N. Y.
Raymond Lead Co., Lake st. S. E. c. Clinton, Chicago, Ill.
Raynor, H. M., 25 Bond st., N. Y.
Reichling, F., 404 Montgomery st., San Francisco, Cal.
Revere Copper Co., 242 South st., N. Y.
Reynolds, James, 41-43 Orange st., New Haven, Conn.
Rice, F. M., 24 Cliff st., N. Y.
Richards & Co., 60 Union st., Boston, M.
Richards, Daniel W. & Co., 88-96 Mangin st., N. Y.
Riottee, N., 104-106 Wash'n. st., N. Y.
Roach, M., 586 S. Canal st., Chicago, Ill.
Robinson & Co., Worcester, M.
Roby, W. G. & Co., 11 Broad st., Boston, M.
Rumsey, L. M. Mfg. Co., 810 N. 2d st., St. Louis, Mo.
St. Louis Metal Co., 7th st., c. Howard, St. Louis, Mo.
Sanborn, J., 217 Water st., N. Y.
Scarabelich, J., 185 Ludlow st., N. Y.
Schultz, A. & Co., 729 E. Pratt st., Baltimore, Md.
Scott, J. B. & Co., 122-124 2d av., Pitt'g., Pa.
Scoville Mfg. Co., 183 E. Lake st., Chicago, Ill.
Selby, T. H. & Co., 116 California st., San Francisco, Cal.
Shepard, Sidney & Co., 145-147 Seneca st., Buffalo, N. Y.
Slover & Tyler, 47 South st., N. Y.
Smith, P. J., 69-71 Middle st., Lowell, M.
Spittall, Geo. P. & Co., 313½ Walnut st., Phila. Pa.
Starr & Mathison, Berry st., nr. 4th, San Francisco, Cal.
Stead, H., Worcester, M.
Stone Bros., 70 Merwin st., Cleveland, O.
Strong & Co., 10 Stevenson st., San Francisco, C.
Stroud & Co., 104 John st., N. Y.
Sullivan, R., 254 South st., N. Y.
Taunton Copper Mfg. Co., 11 Broad st., Boston, M.
Thompson, J., 1229 Long La. st., Phila., Pa.
Thomson, A. A. & Co., 213 Water st., N. Y.
Torrey & Eaton, 31½ Pine st., N. Y.
Trautwein, J., 137 River st., Troy, N. Y.
Troy Waste Mfg. Co., 461-467 River st., Troy, N. Y.
Tunbridge, J., 114 N. J. R. R. av., Newark, N. J.
U. S. Metal Co., 117 Barrow st., N. Y.
Van Noorden, E. & Co., 383-387 Harrison av., Boston, M.
Van Winkle, I. S. & Co., 413 Market st., San Francisco, Cal.
Ville, M. E., 39-43 State st., Albany, N. Y.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Ward, M., 520 W. 52d st., N. Y.
Warren, Salisbury & Nightingale, 15 Exchange pl., Providence, R. I.
Weber, C. W. B., 81 New st., N. Y.
Webster & Crosby, Worcester, M.
Weller, J. S., 72 Wall st., N. Y.
Weill, M., 59 N. Clinton st., Chicago, Ill.
Wheeler, E. S. & Co., 54 Cliff st., N. Y.
White, Edward P. & Co., 4 Burling Slip., N. Y.
Whitney & Marshall, 22 Fremont st., San Francisco, Cal.
Whittemore, H. & Co., 21 Cliff st., N. Y.
Wildes, T., 246 Water st., N. Y.
Williams, E. A. & Son., 107 Plymouth st., Jersey City, N. J.
The Windsor Locks. Steel Co., Housatonic av., Bridgeport, Conn.
Windle, T., 398 Fountain st., Providence, R. I.
Winkler, J. & Co., 36 Main st., Cincinnati, O.
Wise, L. & Co., 16 Main st., Cincinnati, O.
Woodfall, J. A. & Bro., 1105 Fairmount av., Phila., Pa,
Woodmansee & Pearce, 98 Dorrance st., Providence, R. I.
Woodward, E. H., 54 Cliff st., N. Y.
Zwingli, A., 19 Humboldt st., B'kln., N. Y.

Metal—Perforated.

Aitchison, Robert, Perforated Metal Co., 76 E. Van Buren st., Chicago, Ill.
California Perforating Screen Co., 147 Peale st., San Francisco, Cal.
Clinton Wire Cloth Co., Clinton, M., and 59 Beekman st., N. Y.
Dreyfuss, B., 79 Duane st., N. Y.
Felber, Geo., 307-309 Gratiot st., St. Louis, Mo.
Fraser & Chalmers, Fulton and Union sts., Chicago, Ill.
Harrington & King Perforating Co., (The), 224 N. Union st., Chicago, Ill.
Hayes, G., 71 8th av., N. Y.
Mundt & Greter, 88-90 Walker st., N. Y.
Perforated Metal Co., 292 State st., Chicago, Ill.
Shepard, Sidney & Co., Buffalo, N. Y.
Throop Perforating Co., 82 Terrace st., Buffalo.
Towne & Co., 81 Mechanic st., Worcester, M.

Metal—Purchasers of Old

N. Y. Smelting & Refining Co., Jane & West sts., N. Y.

Metal—Sheet.

Brand Mfg. Co., (The), New Britain, Conn.
Bruce & Cook, 190 Water st., N. Y.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Detroit Stamping Co., Detroit, Mich.
Dickerson, Van Dusen & Co., 29 Cliff st., N. Y.
Elmira Iron & Steel Rolling Mill Co., Elmira, N. Y.
Excelsior Sheet Metal Works, Keokuk, Iowa.
Gill, W. A. & Co., Columbus, O.
Hall & Carpenter, 709 Market st., Phila., Pa.
Leeper, B. G., Highland Falls, N. Y.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Phosphor-Bronze Smelting Co., (The), 512 Arch st., Phila., Pa.
Recht, C., 183 Bowery, N. Y.
Reilly, James, 230 West st., N. Y.
Scott, James B. & Co., 122 2d av., Pitt'g., Pa.
Van Noorden, E. & Co., Boston, M.
Waterbury, Farrol Fo'dry & Machine Co., Waterbury, Conn.

Metal—Stamped Ornaments.

Bakewell & Mullins, Salem, O.

Metal—White.

Millard Mfg. Co., 47 Sprague st., Providence, R. I.
Morrow & Strong, San Francisco, Cal.

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Mica.

Alexandria Mica Co., 16 Exchange pl., N. Y.
Chester Mica & Porcelain Co., Chester, Pa.
Crystal Mica Co., 2 Platt st., N. Y.
Dorr, J. P., 389 River st., Troy, N. Y.
Gage & Joost, 235 Water st., N. Y.
Gore, Gregory & Co., 17 N. Salina st., Syracuse, N. Y.
Gould & Watson Co., 110 Water st., N. Y.
Gove, F. M., 16 Exchange pl., N. Y.
Hardy Mica Mining Co., Nashua, N. H.
Heath, John N., 1323 N. 24th st., Phila., Pa.
Huse, Jos. & Son, 95-97 Blackstone st., Boston, M.
Kelly, H. A., 275 Wash'n. st., Boston, M.
Meriden Mica Co., Groton, N. H.
Munsell, Eugene, & Co., 218 Water st., N. Y.
O'Neill, J. & Co., 117 John st., N. Y.
Oppenheimer, S. & Co., 96 Pearl st., N. Y.
Palermo Mica Co., 96 Broadway, N. Y.
Peckham, J. S. & M., Utica, N. Y.
Randall, S. H., 294 Broadway, N. Y.
Ruggles Co., Grafton Centre, N. H.
Ruggles & Randall Mica Co., 26 Union st., Boston, M.
Sills, W. H., 116 Lake st., Chicago, Ill.
Valencia Mica Mining Co., Groton, N. H.
Valencia Mica Co., 115 Broadway, N. Y.

Microscope Manufacturers.

Bausch & Lomb Optical Co., 48 Maiden Lane, N. Y.
Cheyney, J. S., Optical Co., Phila., Pa.
Eaton, A. K., 65 Henry st., Brooklyn, N. Y.
Hawkridge, T., Stevens Institute, Hoboken, N.J.
Heath, Laban, & Co., 30 Hanover st., Boston, M.
McAllister, Thos. H., 49 Nassau st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.

Mineral Wool.

Andres, H., 22 N. 4th st., Phila., Pa.
Gilmous, Robert M., 82 John st., N. Y.
U. S. Mineral Wool Co., 2 Cortlandt st., N. Y.
Western Mineral Wool Co., 9 S. Water st., Cleveland, O.
Worcester, Francis, 108 5th av., Chicago, Ill.

Mops—Cotton.

Darrow, A. R., New London, Conn.
Massasoit Mfg. Co., 86 Leonard st., N. Y.
Nawrath, J. P. & Co., 2 Lispenard st., N. Y.

Mortar—Black and Colored.

Fisher, Erskine W., 18 Broadway, N. Y. 65.
Standard Mortar Color Works, Vincent st., nr. Bond, Cleveland, O.
Walpole Dye & Chemical Works, 46 Oliver st., Boston, M.

Motors—Electric.

Baxter Electric Mfg. & Motor Co., 11 South st., Balt., Md.
Bently-Knight Electric Railway Co., 115 B'way, N. Y.
Brownell & Wight Car Co., St. Louis, Mo.
Brush Electric Co., Cleveland, O.
C. & C. Motor Co., 90 S. 5th av., N. Y.
Chadbornes & Hastings, Forrest Bldg., Phila., Pa.
Cleveland Electric Motor Co., 1st Nat. Bank Bldg., Cleveland, O.
Daft Electric Light Co., (The), 115 B'way, N. Y.
Edgerton Motor Mfg. Co., 1223 Chestnut st., Phila., Pa.
Electrical Accumulator Co., (The), 44 Broadway, N. Y.
Electro-Dynamic Co., 212 Carter st., Phila., Pa.
Geo. F. Card Mfg. Co., (The), Cincinnati, O.
Greeley, Theo. F. S. & Co., 5-7 Dey st., N. Y.
Haines Bros., 55 Broadway, N. Y.
Henry Electric Railway Co., Kansas City, Mo.
Horace A. Keefer Co., (The), Kansas City, Mo. 88.
Julien Electric Co., 120 Broadway, N. Y.
Keith, N. S., 40 Nevada Block, San Francisco, Cal.
Pugh & Russell, Stewart Building, N. Y.
Safety Electric Construction Co., 41 Wall st., N. Y.
St. Louis Car Co., 2023 N. B'way, St. Louis, Mo.
Sprague Electric Railway & Motor Co., Boston, M., and 16-18 Broadway, N. Y.
Triple Thermic Motor Co., Lowell, M.
Van Depoele Electric Mfg. Co., 15-21 Clinton st., Chicago, Ill.
Weis, T. J., 851 Pavonia av., Jersey City Heights, N. J.

Motors—Electric Light.

Acme Electric & Illuminating Co., 106 Liberty st., N. Y.
Baxter Electric Motor & Mfg. Co., 11 South st., Balt., Md., and Potter Building, N. Y.
Bradley Electric Power Co., 18 Cortlandt st., N. Y.
Brush Electric Co., Belden st., Cleveland, O., and 36 Union Square, N. Y.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Cleveland Electric Motor Co., Cleveland, O.
Cleveland Motor Co., 115 Broadway, N. Y.
Colburn, J. W. & Co., Fitchburg, M.
C. & C. Electric Motor Co., 2 Wall st., N. Y.
Detroit Electrical Works, 7th and Woodbridge sts., Detroit, Mich.
Doyle, John, 14 Ann st., N. Y.
Eddy Electric Mfg. Co., Hartford, Conn.
Edgerton Electro Motor Co., 133 N. 7th st., Phila., Pa.
Electric Construction Co., c. Wash'n. and York sts., Brooklyn, N. Y.
Electro Dynamic Co. of Philadelphia, 224 Carter st., Phila., Pa.
Ft. Wayne "Jenney" Electric Light Co., 225 Dearborne st., Chicago, Ill., and Fort Wayne, Ind., and 26 N. 7th st., Phila., Pa.
Jenney Electric Co., Indianapolis, Ind.
Julien Electric Traction Co., 120 B'way, N. Y.
McIntire, W. C. & Co., 506 Commerce st., Phila., Pa.
Massachusetts Electric Power Co., 246 Wash'n. st., Boston, M.
New England Wiring & Construction Co., 244 Wash'n. st., Boston, M.
New York Electric Construction Co., 242 E. 122d st., N. Y.
New York Railway Supply Co., (Ltd.), 40 Wall st., N. Y.
Novelty Machine Works, Wellsville, O.
Reitz, Chas., 141 Virginia av., Indianapolis, Ind.
Richter Electric Light Co., (The), 117-121 N. Front st., Camden, N. J.
Safety Electric Construction Co., 41 Wall st., N. Y.
Sprague Electric Railway & Motor Co., 16 Broad st., N. Y.
Thompson-Houston Electric Co., 178 Devonshire st., Boston, M.
Tremont Electric Light Co., 10 Mt. Wash'n. av., Boston, M.
Triple Thermic Motor Co., 33 Broad st., N. Y.
Union Electric Co., 123 N. 2d st. Phila., Pa.
U. S. Electric Lighting Co., (The), 59-61 Liberty st., N. Y.
Waterhouse Electric & Mfg. Co., Hartford, Conn.
Western Electric Co., Chicago, Ill., and 70 Trinity pl., N. Y.

Motors—Gas.

Connolly Motor Co., 177 Broadway, N. Y. 84.
Universal Engine Co., Rochester, N. Y.

Motors—Hydraulic.

Amherst Hydraulic Motor Co., Holyoke, M.
Backus Water Motor Co., Hamilton st., Newark, N. J.
Chandler Water Motor Co., 132 Oliver st., Boston, M.
Cooper Water Motor Co., Westfield, M.

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Kimball Motor Co., (The), Toledo, O.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Positive Water Motor Co., (The), Front and Laurel sts., Phila., Pa.
Roberts, G. J. & Co., Dayton, O.
Salem Foundry & Machine Shops, Salem, M.
Sawyer, C. A. & Co., Fitchburg, M.
Standard Mfg. Co., 541 Wood st., Pitt'g., Pa.
Tuerk Water Motor Co., Syracuse, N. Y.
U. S. Pump & Valve Co., 26-28 Oliver st., Boston, M.
Universal Engine Co., Rochester, N. Y.
Webster Motor Co., Christiana, Pa.
Worthington, Henry R., 86 88 Liberty st., N. Y.

Motors—Steam.

Brill, J. G. Co., Phila., Pa.
Fairhaven Iron Works, Fairhaven, M.
Hains Bros., 55 Broadway, N. Y.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Standard Fireless Engine Co., 12 Chartress st., New Orleans, La.
U. S. Pump & Valve Co., 26-28 Oliver st., Boston, M.

(Steam) Motors for Street Railroads.

Baldwin Locomotive Works—Burnham, Parry, Williams & Co., Phila., Pa. 16.
Black, Hawthorn & Co., Gateshead-on-Tyne, England.
Burnham, Parry, Williams & Co—(Baldwin Locomotive Works), Phila., Pa.
Dick, Kerr & Co., 101 Leadenhall st., E. C. London, England.
Falcon Engine & Car Works, (Ltd.), Loughborough, England.
Greeley, The E. S. & Co., 5-7 Dey st., N. Y.
Hains Bros., 55 Broadway, N. Y.
Henschell & Son, Cassell, Germany.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
N. Y. Safety Steam Power Co., 64 S. Canal st., Chicago, Ill.
Pole St. Car Motor System, 310 Chestnut st., Phila., Pa.
Porter, H. K. & Co., Pitt'g., Pa.
Pugh & Russell, Stewart Bldg., N. Y.
Rausom, Lewis, 121 Brown st., Akron, O.
Richmond Loco. and Machine Works, Richmond, Va. 12.

Moulding Manufacturers.

Adams, H. C., 122 Bowery, N. Y.
Adley Mfg. Co., 200 N. Union st., Chicago, Ill.
Allen, O. & Son, Lowell, M.
Alling's Sons Co., The Geo., 100 E. Water st., New Haven, Conn.
Anderson, C. F., 61 Ann st., N. Y.
Anderson & Dickey, 41 Bristol st., Boston, M.
Andrews, Fletcher & Co., Sioux City, Iowa.
Angell G. R., 216 Woodward av., Detroit, Mich.
Appleton, S. & G. P., Pembroke, N. H.
Arnold & Wendt, (Chas. Wendt successor), 177 Greenwich st., N. Y.
Aube, E., Jr., 40 Spring st., N. Y.
Austin & Boynton, Jefferson st., c. Lake, Chicago, Ill.
Austin, Johnson & Co., Manchester, N. H.
Avey, G. W. & Co., Richmond, Ind.
Badger, W. F., 61-63 Wareham st., Boston, Mass.
Bailey J. W. & Son, 14 Charlestown st., Boston, M.
Baker, C. & Co., 82 Foster st., Worcester, M.
Baker, L. C., 18 Eustis st., Boston, M.
Baker, F. P. & Co., 47 Hanover st., Boston, M.
Bonte, J. P. & Co., 14 Genesee st., Cincinnati, O.
Bantleon, D., 221 N. Water st., Rochester, N. Y.
Baretta, L. A. & Co., 6 Charlestown st., Boston, M.
Bartle, M., 9 Aqueduct st., Rochester, N. Y.
Bassett, N. B. & Co., 24 N. Clinton st., Chicago, Ill.
Baxter, C. O. & Co., 115 Pine st., St. Louis, Mo.
Beach, M. & Son, West st., c. Bridge, New Milford, Conn.
Becker & Co., 330 W. 36th st., N. Y.
Bethard, A. C., Springfield, O.
Bon & Sherman, Syracuse, N. Y.
Booth, J. R., Burlington, Vt.
Boston Co-operative Moulding Co., 49 Charlestown st., Boston, M.
Bossert, Jacob, 67-83 Middleton st., Brooklyn, N. Y.
Bossert, Lewis, 18 Johnson av. Brooklyn, N. Y.
Bozenhardt, F., 502 E. 19th st., N. Y.
Brachvogel & Press Mfg. Co., 251 Wabash av., Chicago, Ill.
Bradstreet, J. R., 641 Mission st., San Francisco, Cal.
Brassington, J. D., 261 W. 27th st., N. Y.
Bridgeport Lumber Co., ft. Gold st., Bridgeport, Conn.
Bridgeport Sash and Blind Mfg. Co., (The), 35 Hamilton av., Bridgeport, Conn.
Briggs & Allyn Mfg. Co., Lawrence, M.
Brooklyn Mill and Lumber Co., (The), Atlantic c. Schenectady avs., Brooklyn, N. Y.
Bronsons, Weston, Dunham & Co., 75 State st., Boston, M.
Bronsons, Weston, Dunham & Co., Burlington, Vt.
Bruns, Wm., 325 Broadway, N. Y.
Bugbee & Spooner, 164 Devonshire st., Boston, M.
Burkardt, M., 545 Washington st., San Francisco, Cal.
Burrowes, J. W., Portland, Maine.
Burrows & Kenyon, Washington st., c. Dean, Providence, R. I.
Butler, J. C. & Co., Sandusky, O.
Caldbeck, J. M., St. Johnsbury, Vt.
Carter, E., 22 Spring st., Troy, N. Y.
Cassell, M. H., Davenport, Iowa.
Ceppi, A. & Co., 101 B'way bridge, Boston, M.
Chace, H. B., 126 Main st., San Francisco, Cal.
Chaney, G. H., 315 N. Pearl st., Albany, N. Y.
Clark, C. W. & Co., 184 E. Water st., New Haven, Conn.
Codman, C. H. & Co., 34 Bromfield st., Boston, M.
Cohen, H., 19 Dupont st., San Francisco, Cal.
Cohn, H., 172 Elm st., Cincinnati, O.
Cole, C. & Co., 258 W. 28th st., N. Y.
Cole, Geo. E. & Co., 204 Broad st., Providence, R. I.
Collins, D. P. & Son, 42 Bethune st., N. Y.
Collins, T., 149 River st., Troy, N. Y.
Collins, W., 130 5th st., Troy, N. Y.
Cook, F. D. & Co., Nashua, N. H.
Cook, G. & Son, Laconia, N. H.
Columbus Picture Frame Co., Columbus, O.
Cumiskey, Owen, 40-42 Spring st., N. Y.
Curtis, C. B., 88 Winchester av., New Haven, Conn.
Cutting & Crump, West Bay City, Mich.
Dalrymple & Co., 265 Halsey st., Newark, N. J.
Davis, J., 164 Montgomery st., Albany, N. Y.
De Man Bros., Cherry st., c. Trumbull av., Detroit, Mich.
Didier, J. H. & Son, 149 Baxter st., N. Y.
Diefenbach, F., 180 William st., N. Y.
Dietrich, J. E. & Son, Ottumwa, Iowa.
Diettrich, M. O., 153 Essex st., Boston, M.
Dixon & Peterson, 18 N. Canal st., Chicago, Ill.
Dodds, O. J., 137 Conselyea st., B'klyn, N. Y.
Dodge, J. C. & Son, 450 S. Main st., Providence, R. I.
Donaldson, Wm. M. & Bros., 40 Holabird av., Winsted, Conn.
Dugan, A., Flushing av., B'klyn, N. Y.
Dunn, W. S. & Co., 46 Murray st., N. Y.
Duncan & Johnson, 270 S. Clinton st., Chicago, Ill.
Earl, A., Columbus, O.
Edmans, W. J., r. 668 River st., Troy, N. Y.
Ehrhard & Hagen, 247 W. 28th st., N. Y.
Eisenfelder, C., 93 Elizabeth st., N. Y.
Elder, E. E., Lynn, M.
Engelberger & Barkhorn, Howard st., c. Mercer, Newark, N. J.
Eureka Planing Mill Co., Sioux, Iowa.
Evans, Cunningham & Jones, Pitt'g., Pa.
Ferguson Bros., 449 W. 30th st., N. Y.
Fillman & Co., 201 Lake st., Chicago, Ill.
Fleming, W. H., 113 Madison st., Chicago, Ill.
Foster Bros., Danbury, Conn.

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Francke & McCall, 41 Phelan Bldg., San Francisco, Cal.
Freeman, C. I., 28 Beverly st., Boston, M.
Fritts, D. H. & Co., 196 S. Deplaines st., Chicago, Ill.
Frost, W. E. Mfg. Co., S. Canal st., c. W. 12th, Chicago, Ill.
Fuchs & Kleinan, 170 Chambers st., N. Y.
Gahagan, J. Sons, 95 Adams st., Hoboken, N. J.
Ganter, F. X., 11 W. Pratt st., Balt., Md.
Garmo & Humes, Keokuk, Ind.
Garrison, G. W. & Son, 632 W. Pratt st., Balt., Md.
Gemmill & Gibbard, Eureka, Cal.
Gifford, T. J. & Sons, Salem, M.
Gillis, J. W., 195 Exchange st., Rochester, N. Y.
Glendon Co., 45 Kilby st., Boston, M.
Goldberg, J. H. & Co., 96 Liberty st., N. Y.
Granniss & Hurd Lumber Co., (The), Simond's Dock, Bridgeport, Conn.
Gramm's, W. Sons, 3 Marion st., N. Y.
Graywack & Vanderwerken, 412 Fulton st., Troy, N. Y.
Gregorius, J., 129 Attorney st., N. Y.
Gump, S. & G., 581 Market st., San Francisco, Cal.
Gunderson, S. T. & Sons, 22d and Lafiin sts., Chicago, Ill.
Gusthal, S., 82 Park pl., N. Y.
Hall, C. O., 1042 Milwaukee av., Chicago, Ill.
Hall & Garrison, 122 Bowery, N. Y.
Hall Mfg. Co., (The Chapin), Ogden st., c 4th av., Newark, N. J.
Hammond H., Williamstown, Mich.
Hanford, G. R. & Co., Watertown, N. Y.
Hansman, Volker & Co., Kansas City, Mo.
Horcheler, G. H., 9 Basin st., Rochester, N. Y.
Hargreaves Mfg. Co., 17th st., c. Howard, Detroit, Mich.
Hart, J., 430 W. Lake st., Chicago, Ill.
Hartney, J. D., Springfield, O.
Haser & Engelhardt, 19th st., c. Purple, Chicago, Ill.
Haspe, L. & Co., 180 Race st., Cincinnati, O.
Hatch, Bailey & Co., South Norwalk, Conn.
Hatts, J. H. Son, 88 Hamilton st., Newark, N. J.
Hausmann Bros., Market st., c. Sansome, San Francisco, Cal.
Hazlett & Underhill, E. Cambridge, M.
Heck, A., Sr. & Co., Gratiot av., c. McDoughall av., Detroit, Mich
Hedden, V. J. & Son, Ogden st., c. Orange, Newark, N. J.
Herbolsheimer, L., 94 Clinton st., N. Y.
Hempy, H. M. & Son, 47-49 Center st., Cleveland, O.
Hershiser, Snyder & Dundon, Columbus, O.
Heyman's, A. Son, 71 Essex st., N. Y.
Heyns & Co., 58 Plum st., Cincinnati, O.
Hicks, J., 44 3d st., Troy, N. Y.
Hobson, O. F., 406 Border st., E. Boston, M.
Hodge, J., Manchester, N. H.
Hollerbach, F., 100-102 Church st., N. Y.
Hooker, W. H., Milford, Mass.
Hopper Artists Supply Co., 312 N. 6th st., St. Louis, Mo.
Hotchkiss Bros., Torrington, Conn.
Hubbard, W. W., Manchester, N. H.
Hughes, J. R., Liberty av., c. Van Sinderen, Brooklyn, N. Y.
Hughes, W. J. & Son, 243 E. Market st., Louisville, Ky.
Husche & Jurs, 52 W. Vanburen st., Chicago, Ill.
Hussey, R. C., Milford, M.
Hutchins, E. N. & Co., Lawrence, M.
Hydara, F., 4 Mechanic st., Troy, N. Y.
Hyde & Co., Galesburg, Ill.
Indermill, T. F., St. Joseph, Mo.
Indianapolis Moulding & Picture Frame Co., Indianapolis, Ind., and 13 W. B'way, N. Y.
Irwin & Wilson, Whitehall, N. Y.
Jaquith, C. E., Peterboro, N. H.
Jarvis & Mecluer, 107 Hamilton st., Newark, N. J.
Johnson, A. A., 459 Cherry st., N. Y.
Joslyn, A. W. & Co., 181 Union st., Worcester, M.
Judkins & Co., 171 S. Canal st., Chicago, Ill.
Komp, A. M., 402 E. 80th st., N. Y.
Keogh, C. B. & Co., 8 Howard st., N. Y.
Kent, B. M., Putnam, Conn.
Kenyon, Grimwood & Co., 597 High st., Providence, R. I.
Kern, W., 3 Bedford st., N. Y.
Kimlin & Williams, Railroad st., New Milford, Conn.
King's, Wm. & Co., M. & E. R. R. av., c. Plane st., Newark, N. J.
Kissinger, H. & Co., 185-189 State st., New Haven, Conn.
Klahre, A., 88 Madison st., Hoboken, N. J.
Klicka, J., 41 S. Jefferson st., Chicago, Ill.
Knapik, P. P., 425 4th st., San Francisco, Cal.
Larkins, G. W. & Co., 643 Gratiot av., Detroit, Mich.
Lawrence, Leonard & Co., ft. Lieb st., Detroit, Mich.
Lehnhard & Earls, Evansville, Ind.
Leserman, L., 10 Cortlandt st., N. Y.
Lewis, H. J. & Bro., 810 10th st., Louisville, Ky.
Lincoln Mills, Eureka, Cal.
Lippi Bros., 749 Market st., San Francisco, Cal.
Lobstein, J. G., 455 W. 21st st., Chicago, Ill.
Lombard, J. N., 70 Beverly st., Boston, M.
Loomis, J., Baltic st., c. Nevins, Brooklyn, N. Y.
Ludewig, J., 13 W. B'way, N. Y.
Lamb, Geo. W. & Son, Poughkeepsie, N. Y.
Macauley, G. W., 44 Thayer st., Boston, M.
McClure & Ryan, 1414 W. Main st., Louisville, Ky.
McConnell, W. & Co., 276 9th av., N. Y.
McGenagle, R., ft. Grafton av., Newark, N. J.
McKnight, R. A., 308 Washington st., Jersey City, N. J.
McMutt, J. J., Wareham st., c. Malden, Boston, M.
Mages, G. C. & Co., 52 W. Vanburen, st., Chicago, Ill.
Nomback, J., 112 Stanton st., N. Y.
Mehler Eckstenkemper, 901 E. Green st., Louisville, Ky.
Meyer, J. F. & Co., Hannibal, Mo.
Moody, G. E. & Co., 9th st., N. of B'way, Louisville, Ky.
Moore, J. & Co., Syracuse, N. Y., and Peoria st., c. Kinzie, Chicago, Ill.
Morris & Kennedy, 21 Post st., San Francisco, Cal.
Morse, C. D. & Co., Milbury, M.
Mosher & Brownell, New Bedford, M.
Murphy, J. J. & Co., 14 Beverly st., Boston, M.
Newell, G. H., 57 Gorham st., Rochester, N. Y.
N. Y. Lumber & Wood Working Co., E. 134th st., and Alexander av., N. Y.
Nonnenbacher & Co., 102 Mulberry st., N. Y.
Nurre, A. J. & Co., 164 Main st., Cincinnati, O.
O'Connor, J. J., 191 N. Water st., Rochester, N. Y.
O'Corr, H. A. & Co., 85 Central av., Rochester, N. Y.
Ohio Planing Mill & Lumber Co., (The), Poplar and Baymiller sts., Cincinnati, O.
Onderdonk, W. T., 514 1st av., N. Y.
Otis, J., Meriden, Conn.
Palmer, Fuller & Co., W. 22d st., c. Union, Chicago, Ill.
Patterson, H. S., Torrington, Conn.
Paul, J. T. & Co., 350 Albany st., Boston, M.
Payne, J., 36 River st., Rochester, N. Y.
Peirce & Bushnell, 63 Duane st., N. Y.
Perry, S. A. & Co., 624 Market st., San Francisco, Cal.
Persons, E. P., Marengo, Ill.
Peterson, C. F., 12 Marshall st., Boston, M.
Phelps, W. H. & Co., Atwater, O.
Pickens, L. W., 99 Beverly st., Boston, M.
Pingree, R. C. & Co., Portland, Me.
Pratt, A. & Co., 164 Devonshire st., Boston, M.
Priest, C. A., Fitchburg, M.
Prince & Underwood, Danielsonville, Conn.
Propper, M., 286 Bowery, N. Y.
Purdy, E. H. Mfg. Co., 48 W. 13th st., N. Y.
Randall, N., Newark st., c. Park av., Hoboken, N. J.
Ranger, C., Holyoke, M.
Ransom, C. S. & Co., 28 Center st., Cleveland, O.
Rees, F. P., 107 Newark st., Hoboken, N. J.
Reynolds, C. H., Met. av., c. Stewart av., B'klyn., N. Y.

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Rice, C. R., 259 Wabash av., Chicago, Ill.
Rice & Griffin Mfg. Co., 5 Sargent st., Worcester, M.
Richardson, N., 25 Webster st., Newark, N. J.
Richmond Moulding Co., Richmond, Ind.
Ricker, A. T., 133 Sheldon st., Hartford, Conn.
Riverside Lumber Co., Northampton, M.
Robbins, F. S., 13 Blackstone st., Worcester, M.
Roberts & Murray, 21 Wareham st., Boston, M.
Robertson, J. A., 338 Federal st., Boston, M.
Ruehl, P. & Co., 294-296 Main st., Cincinnati, O.
Ruhland, Henry, 463 Pearl st., N. Y.
St. John Wood Working Co., (The), Canal dock, Stamford, Conn.
Salisbury, F. W. & Co., 13 Congress st., Troy, N. Y.
Sanborn, Vail & Co., 857 Market st., San Francisco, Cal.
Sandstrom & Carter, 128 N. May st., Chicago, Ill.
Schaber, Reinthal & Co., 297 Spring st., Cleveland, O.
Schaefer, J., Lorimer st., c. McKibbin, Booklyn, N. Y.
Schiller, C. F., 935 Market st., San Francisco, Cal.
Schmidt, M., 104 Centre st., N. Y.
Schoepflin, E. & Co., 15 Chardon, Boston, M.
Schorr, J., 10 Division st., N. Y.
Schrafft, A. & Co., 585-587 Market st., Newark, N. J.
Schroth & Ahrens, 637 S. Halsted st., Chicago, Ill.
Schuhman, H. A. & Co., 433 Plum st., Cin., O.
Schussler Bros., 727 Market st., San Francisco, Cal.
Sentenne, E. H., 132 Nassau st., N. Y.
Serrell, A. T. & Son, 11th av., c. W. 58th st., N. Y.
Shaffer & Webber, 163 Union st., Worcester, M.
Shaw's, Thos. Sons, Newburg, N. Y.
Shelley, H. & Son, Greenwich, Conn.
Shepard & Morse Lumber Co., 82 Wall st., N. Y.; Mason Bldg., Liberty sq., Boston, M.; Burlington, Vt.
Skillings, Whitneys & Barnes Lumber Co., 6 Kilby st., Boston, M.
Slade & Kelton, Columbus, O.
Slocum & Pope, 153 W. Front st., Cincinnati, O.
Smith, A. V. G., 6 Mechanic st., Troy, N. Y.
Smith, E. C. & Co., 39 Beverly st., Boston, M.
Smith, Floyd B., Benedict st., Waterbury, Conn.
Smith, Wm. H., 10 Benedict st., Waterbury, Conn.
Smitte & Russell Co., 136 Water st., New Haven, Conn.
Snow & Co., 12 Post st., San Francisco, Cal.
Sowle, F. A., New Bedford, M.
Sparr & Weiss, 198 N. Union st., Chicago, Ill.
Spiegel, Marckhoff & Co., 76 Murray st., N. Y.
Stickney, W. J., Salem, M.
Stoertz Bros., 3 Aqueduct st., Rochester, N. Y.
Stone, E. E. & Co., Spencer, M.
Strobel, L. A. & Co., Elm st., c. Canal, Cin., O.
Struck, J. N. & Bro., Chestnut st., c. Garden, Louisville, Ky.
Swanson Bros., Evansville, Ind.
Swords, W. F., E. Washington av., Bridgeport, Conn.
Suhr, H., 166 W. Erie st., Chicago, Ill.
Summers, T. A., 71 N. Water st., Rochester, N. Y.
Taaffee Bros., 128 Water st., Albany, N. Y.
Taft, C. H., Stamford, Conn.
Taft, Morgan & Co., Burlington, Vt.
Tufts, L. C. & Co., 119 Elm st., N. Y.
Thatcher, C. M., 25 Arch st., Boston, M.
Thomas, R. R. & Co., 18th st., c. Market, Phila., Pa.
Thompson, A. C. Brockton, M.
Thomsen, G. H. Mfg. Co., 25 S. 4th st., St. Louis, Mo.
Toledo Moulding Co., Toledo, O.
Tolliner, H., 294 Graham st., Brooklyn, N. Y.
Towne, E. W. & Co., 32 Lancaster st., Boston, M.
Trautman, E., 212 Centre st., N. Y.
Tredway, A. & Co., 108 Woodward av., Detroit, Mich.
Trimble, J. A., 222 E. 28th st., N. Y.
Ulrich, W. & A., 242 Lake st., Chicago, Ill.
U. S. Frame & Picture Co., 96 Liberty st., N. Y.
Vaga, Z. W. & Co., 49 Franklin st., Chicago, Ill.
Vankuyck, H. & Son, 237 Centre st., N. Y.
Van Stone & Westlake, 124 Cannon st., Bridgeport, Conn.
Wald, G. A., 6 Lowell st., Boston, M.
Webber & Banker, 229 N. Water st., Rochester, N. Y.
Webber, J. R. & Co., 2000-2004 N. Broadway, St. Louis, Mo.
Weimar Mfg. Co., 317 E. 22d st., N. Y.
Wells, Russel & Co., Mission st., c. Fremont, San Francisco, Cal.
Wheeler, G. H. D., 37 Bristol st., Boston, M.
White, Gillespie & Thayer, Stamford, Conn.
White, Potter & Page Mfg. Co., 123 Chambers st., N. Y.
White, S. R., Bloomington, Ill.
White, W. S. & Co., Lumber st., Hartford, Conn.
Williams, A. J. & Co., 871 B'way, Albany, N. Y.
Williams, D. M., 2110 Filbert st., Phila., Pa.
Williamsport Frame & Moulding Co., Williamsport, Pa.
Wilkie, A., Mechanics Mills, San Francisco, Cal.
Wilson, H., Jacksonville, Ill.
Wohbrab, F., 187 Forsythe st., N. Y.
Wolff Bros. Mfg. Co., 166-180 W. Erie st., Chicago, Ill.
Wuerth, G., 48 Marion st., N. Y.
Young, N. N., 113 Central av., Newark, N. J.
Young, G. W., 494 Harrison av., Boston, M.
Zimmerman, F., 34 Columbus st., Cleveland, O.
Zubrinsky, A., 25 E. Broadway, N. Y.

Moulds—Ingot.

Collins, H. E. & Co., Lewis Block, Pitt'g., Pa.

Moulds—Steel.

Irwin, W. H., 19 Morgan st., Allegheny, Pa.

Nail Manufacturers.

Albert Nail Co., 79 Duane st., N. Y.
American Tack Co., 116 Chambers st., and Fairhaven, M.
American Wire Nail Co., (The), Covington, Ky.
Ames, Winslow & Co., Jersey City, N. J.
Anchor Nail & Tack Works—Chess, Cook & Co., Pitt'g., Pa.
Ausable Horse Nail Co., 4 Warren st., N. Y., and 420 Commerce st., Phila., Pa.
Austin, Soule & Brazier, Park st. and 8th av., Milwaukee, Wis.
Beale, Geo. E., Jr., 182-184 W. 4th st., N. Y., and 226 State st., Boston, M.
Belfont Iron Works, 12 Johnson Bldgs., Cincinnati, O.
Bellaire Nail Works, Bellaire, O.
Bellefonte Nail Works, Bellefonte, Pa.
Belleville Nail Co., 204 N. 3d st., St. Louis, Mo.
Belmont Iron Works Co., Ironton, O.
Belmont Nail Co., Wheeling, W. Va.; 310 N. 3d st., St. Louis, Mo., and 36 W. 3d st., Cincinnati, O.
Benwood Iron Works, Wheeling, W. Va.
Birdsboro Nail Works—E. & G. Brooke Iron Co., Birdsboro, Pa.
Bissell, David S., Pitt'g., Pa.
Bleecker, Augustus & Son, 48 South st., N. Y.
Boonton Iron Works, Boonton, N. J.
Borden & Lovell, 70 West st., N. Y.
Boston Steel Nail & Tack Works, 158 W. 2d st., Boston, M.
Boyle, Thos. G. & Co., 708 Penn av., Pitt'g., Pa.
Bridgeport Tack Works, South av., c. Water st., Bridgeport, Conn.
Bridgewater Iron Co., 73 Pearl st., N. Y., and Bridgewater, M.
Brooklyn Wire Nail Co., 128 Freeman st, B'klyn, N. Y.
Brooke, E. & G. Iron Co., Birdsboro, Pa.
Brown, Bonnell & Co., Youngstown, O.
Bruce, G. W., 24 Duane st., N. Y.
Bryant Nail Co., 46 Lincoln st., Boston, M., and Holliston, M.
Bussing, A., 4 Warren st., N. Y., and 420 Commercial st., Phila., Pa.

The numbers following names indicate page on which the firm advertises.

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Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Capewell Horse Nail Co., Hartford Conn.
Centralia Iron & Nail Works, Centralia, Ill.
Champion Horse Nail Co., Rutland, Vt.
Chesapeake Nail Works, 413 Com. st., Phila., Pa.
Chess, Cook & Co., 116 Water st., Pitt'g., Pa.
Clarkson, J. W., 14 Cliff st., N. Y.
Cleveland Nail Works, 106 Canal st., Cleveland, O.
Cleveland Tack Works, Hamilton st., c. Wason, Cleveland, O.
Cobb's Iron & Nail Co., (The), Aurora, Ind.
Cobb & Drew, Plymouth, M.
Coles, Jno. & Bro., 317 Olive st., Louis, Mo.
Collins, P., 111 Kent av., B'klyn, N. Y.
Colorado Coal & Iron Co., South Pueblo, Col.
Condit, Fuller & Co., Cleveland, O.
Creaghe, S., 619 Vincent st., Phila., Pa.,
Crescent Nail Works—Standard Nail & Iron Co., Williamsport, Pa.
Cumberland Nail & Iron Co., Bridgeton, N. J., and 43 N. Water st., Phila., Pa.
Damerel, Geo., 82 John st., N. Y.
Dilworth, Porter & Co., (Ltd.), Wood st., c. Water, Pitt'g., Pa.
Donahue, R., Burlington, Iowa.
Double-Pointed Tack Co., 108 Chambers st., N. Y.
Dunbar, Hobart & Whidden, 39 Warren st., N. Y., and South Abington, M.
East Bridgewater Iron Co., 81 Water st., Boston, M.
Elliott & Dobbie, 28 E. Prospect st., Cleveland, O.
Falcon Iron & Nail Co., Niles, O.
Field, A. & Sons, 88 Chambers st., N. Y.; 409 Commerce st., Phila., Pa., and Taunton, M.
Finn, M., 162 Master st., Phila., Pa.,
Fowler Nail Co., Seymour, Conn.
Fuller Bros. & Co., 139 Greenwich st,. N. Y.
Gibbs, B., r. 80 Mulberry st., N. Y.
Globe Nail Co., Howard st., Roxbury, M.
Gosnold Mills, New Bedford, M.
Gould & Co., Camden, Me.
Graff, Bennett & Co., 97 Water st., Pitt'g. Pa.
Greenbaum's Michael Sons, 9 Canal st., Chicago, Ill.
Hadley, S., 116 Chambers st., N. Y.
Harrisburg Nail Works, Harrisburg, Pa.
Hartman Steel Co., (Ltd.), 48 5th av., Pitt'g., Pa.
Hassall, Wm., 63 Elizabeth st., N. Y.
Hicks & Dickey, 413 Commerce st., Phila., Pa.
Hollis Tack & Nail Co., (Ltd.), 24th and Josephine sts., Pitt'g., Pa.
Horton, Gilmore, McWilliams & Co., 172-176 Lake st., Chicago, Ill.
Howe & Co., 181 River st., Troy, N. Y.
H. P. Nail Co., ft. Case av., Cleveland, O.
Illinois Wire Nail Co., (The), 224-226 N. Union st., Chicago, Ill.
Jefferson Iron Works, Steubenville, O.
Jenkins, D. S. Brockton, M.
Johnson, Fields & Co., 400 N. Main st., St. Louis, Mo.
Jones & Goynes, Cohoes, N. Y.
Jones & Laughlins, (Ltd.), 3d av. and Fry st., Pitt'g., Pa., and Lake and Canal sts., Chicago, Ill.
Judson Mfg. Co., 329 Market st., San Francisco, Cal.
Juniata Iron & Steel Works—Shoenberger & Co., Pitt'g., Pa.
Kelley Nail & Iron Co., Ironton, O.
Kensington Iron & Steel Works—James Rowland & Co., 920 N. Delaware av., Phila., Pa.
Kimbark, S. D., Mich. av., c. Lake st., Chicago, Ill.
King, Gilbert & Warner, 1 Pioneer blk., Columbus, O.
La Bell Iron Works, Wheeling, W. Va.
Lock Haven Nail Co., Lock Haven, Pa.
Laughlin Nail Co., Martin's Ferry, O.
Leeds, Robinson & Co., 75 North st., Boston, M.
Livingston Horse Nail Co., 104 Reade st., N. Y.
Maylar, J., 224 E. 44th st., N. Y.
Mechlenborg, J. B., 66 W. 3d st., Cincinnati, O.
Metropolitan Wire Nail Mfg. Co., 312 E. 22d st., N. Y.
Meysenburg, O. W. & Co., Phenix Bldg., Chicago, Ill.
Michel, P., 58 Boerum st., B'klyn, N. Y.
Milton Iron Co., Milton, Pa.
Mt. Hope Iron Co., 137 Milk st., Boston, M.; 52 S. Water st., Providence, R. I., and Somerset, M.
Moorhead, Bro. & Co., 64 Anderson st., Allegheny, Pa.
Morganstern, Malaby & Co., 295 Penna. av., Allegheny, Pa.
Morris, Wheeler & Co., 28 Reade st., N. Y.
National Horse Nail Co., Vergennes, Vt.
Nelson, Abram, 295 Pearl st., N. Y.
N. E. Nail Co., Worcester, M.
New Haven Nail Co., New Haven, Conn.
N. Y. Wire Nail Co., 12 1st st., N. Y.
Niles, H. N., 115 Prince st., N. Y.
North Chicago Rolling Mill Co., 17 Metropolitan Bldg., Chicago, Ill.
Northwestern Horse Nail Co., Factoryville, Ill.
Norway Tack Co., Wheeling, W. Va.
Old Colony Iron Co., 36 Broad st., Boston, M. and Taunton, M.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Oliver & Roberts Wire Co., (Ltd.), 801 Bingham st., Pitt'g., Pa.
Omaha Iron & Nail Co., Omaha, Neb.
Oxford Iron & Nail Co., 83 Washington st., N. Y., and S. Water st., c. Bullion, Providence, R. I.
Pacific Iron & Nail Co., 37 Market st., San Francisco, Cal.
Parker Mills, Wareham, M.
Parkhurst & Wilkinson, 142 Kinzie st., Chicago, Ill.
Penna. & N. J. Nail Mfrs., Conference, 122 Race st., Phila., Pa.
Phelps Mfg. Co., 13 Drumme st., San Francisco, Cal.
Phillips & Townsend, 1303 Mascher st., Phila., Pa.
Pickering, R. S., 306 Master st., Phila., Pa.
Pittsburgh Wire Nail Co., 801 Bingham st., Phila., Pa.
Plymouth Mills, Plymouth, M.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Pottstown Iron Co., Pottstown, Pa.
Putnam, H. W., 108 Chambers st., N. Y.
Putnam Nail Co., Ericsson st., opp. Walnut, nep. Boston, M.
Quayle, F., 128 Boerum pl., Brooklyn, N. Y.
Quincy, John W. & Co., 98 William st., N. Y.
Reed Bros., Brockton, M.
Reid, A. L., 211 Pearl st., N. Y.
Ripley & Bartlett, Plymouth, M.
Riverside Iron Works, Wheeling, W. Va.
Robinson Iron Co., Plymouth, M.
Rounds, L. A., Taunton, M.
Rutland Nail Works, Rutland, Vt.
Salem Wire Nail Co., Salem, O.
Schoenberger & Co., 15th st., c. Etna, Pitt'g., Pa.
Schuchman, H., 103 Stuben st., Pitt'g., Pa.
Scranton, J. S., 83 Washington st., N. Y.
Seed, J. H., r. 43 Centre st., N. Y.
Shelton Co., (The), Birmingham, Conn.
Simmons & Woodsum, East Braintree, M.
South Tredegar Iron Co., Chattanooga, Tenn.
Standard Nail & Iron Co., Middleport, O.
Stanley Works, 79 Chambers st., N. Y., and New Britain, Conn.
Star Rivet Co., 224 S. 4th st., Phila., Pa.
Starke, A., 411 E. 10th st., N. Y.
Stebbins, C. G., 103 Reade st., N. Y.
Steele, Birdwell & Ford, Minneapolis, Minn.
Stetson & Talbot, Holliston, M.
Stevens & Willis, East Braintree, M.
Sunbury Nail, Bar Guide Iron Mfg. Co., Sunbury, Pa.
Swift Mfg. Co., Middleport, O.
Talbott, C. R. Co., (The), 36 W. 3d st., Cin., O.
Taunton Tack Co., Taunton, M.
Thayer & Judd Paraffine Co., New Bedford, M.
Tiebout, W. & J., 18 Chambers st., N. Y.
Troy Steel & Iron Co., Madison st., c. 1st, Troy, N. Y.
Tremont Nail Co., West Wareham, M., and 162 High st., Boston, M.
Virginia Nail & Iron Works Co., Lynchburg, Va.
Wallace & Co., Wm. H., 131 Washington st., N. Y.
Wareham Nail Co., South Wareham, M.

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Waterman, H. D. & S. J., 612 N. 3d st., St. Louis, Mo.
Waterman, L. C. & Sons, Hanover, Mass.
Waugh, R. F., Belleville, Ill.
Weaver & Roberts, 72 N. 4th st., Phila., Pa.
Western Nail Co., 418 N. 3d st., St. Louis, Mo., and Belleville, Ill.
Weymouth Iron Co., 134 Milk st., Boston, M.
Wheeling Iron & Nail Co., Wheeling, W. Va.
Williamsport Iron & Nail Works, Williamsport, Pa.; 30 N. 4th st., Phila., Pa., and 55 West st., N. Y.
Wire Goods Co., Worcester, M.
Zug & Co., (Ltd.), 13th and Etna sts., Pitt'g., Pa.

Nails—Barbed.

American Wire Nail Co., (The), E. side of Washington st., nr. 15th, Covington, Ky.

Nails—Boat.

American Tack Co., Fairhaven, M.
Edes, Oliver & Son, Plymouth, M.

Nails—Bridge.

American Wire Nail Co., Covington, Ky.

Nails—Copper.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Cerf, Fredk., 109 E. 106th st., N. Y.
Johnson, Willis, 21 Meadow st., Waterbury, Conn.
Merchant & Co., 9 Burling Slip, N.Y., and 317 Arch st., Phila., Pa.

Nails—Chisel-Pointed.

Field, A. & Sons, 88 Chambers st., N. Y.
Morris, Wheeler & Co., Phila., Pa., and 28 Reade st., N. Y.
Philips, Townsend & Co., Phila., Pa.

Nails—Clinch.

East Bridgewater Iron Co., Rogers & Sheldon, 240 Congress st., Boston, M.

Nails—Clout.

American Tack Co., Fairhaven, M.
Boston Steel Nail & Tack Works, Boston, M.
Plymouth Mills, Plymouth, M.
Stanley Works, New Britain, Conn.
Walkley Hardware Co., (The), Plantsville, Conn.
Waterman, L. C. & Sons, Hanover, M.

Nails—Cut.

American Iron & Steel Works, Jones & Laughlins, (Ltd.), Pitt'g., Pa.
Anchor Nail & Tack Works, Chess, Cook & Co., Pitt'g., Pa.
Atlantic Iron & Nail Works, P. L. Kimberly & Co., Sharon, Pa.
Belfont Iron Works, Ironton, O.
Bellaire Nail Works, Bellaire, O.
Bellefonte Iron & Nail Co., (Ltd.), Bellefonte, Pa.
Belleville Steel & Iron Nail Works, Belleville, Ill.
Belmont Nail Co., Wheeling, W. Va.
Benwood Iron Works, Wheeling, W. Va.
Birdsboro Nail Works, E. & G. Brooke Iron Co., Birdsboro, Pa.
Boonton Iron Works, Boonton, M.
Borden & Lovell, 70 West st., N. Y.
Brierfield Coal & Iron Co., Brierfield, Ala.
Bush, Lewis, South Chicago, Ill.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Central Iron Works, Helena, Ala.
Centralia Iron and Nail Works, Centralia, Ill.
Champion Steel & Iron Works, W. N. Whitely, Springfield, O.
Chattanooga Nail & Tack Co., T. J. Lattner & Co., Chattanooga, Tenn.
Chesapeake Nail Works, Chas. L. Bailey & Co., Harrisburg, Pa.
Cleveland Nail Works, T. D. Graham, 106 Canal st., Cleveland, O.
Clinton Rolling Mill, Graff, Bennett & Co., Pitt'g., Pa.
Cobb's Iron & Nail Co., Aurora, Ind.
Colorado Coal & Iron Co., South Pueblo, Col.
Crescent Nail Works, Standard Nail & Iron Co., Williamsport, Pa.
Cumberland Nail & Iron Co., Bridgeton, M.
Dalmatia Nail & Iron Co., Dalmatia, Pa.
Danville Nail Works, Danville Nail & Mfg. Co., Danville, Pa.
Duncannon Iron Co., 122 Race st., Phila., Pa.
East Bridgewater Iron Co., Rogers & Sheldon, 240 Congress st., Boston, M.
East Chicago Steel Works, Hammond, Ind.
Ellis & Lessig Steel & Iron Co., (Ltd.), Pottstown, Pa.
Etna Iron Works, (Ltd.), New Castle, Pa.
Excelsior Nail & Tack Works, P. Richards & Son, Nicetown, Phila., Pa.
Falcon Iron & Nail Co., Niles, O.
Greencastle Iron & Nail Co., Greencastle, Ind.
Harrisburg Nail Works, Harrisburg, Pa.
Hollidaysburg Iron & Nail Co., Hollidaysburg Pa.
Jackson Steel & Nail Mill Co., Jackson, O.
Jefferson Iron Works, Steubenville, O.
Johnson, Reuben & Co., Northumberland, Pa.
Junction Iron Co., Mingo Junction, O.
Juniata Iron & Steel Works, Shoenberger & Co. Pitt'g., Pa.
Juniata Rolling Mill, McLanahan, Smith & Co., (Ltd.), Hollidaysburg, Pa.
Kelly Nail & Iron Co., Ironton, O.
Kensington Iron & Steel Works, James Rowland & Co., 920 N. Delaware av., Phila., Pa.
Knoxville Iron Co., Knoxville, Tenn.
La Belle Iron Works, Wheeling, W. Va.
Laughlin Nail Co., Wheeling, W. Va.
Lewisburg Nail Works, Lewisburg, Pa.
Lock Haven Nail Co., Lock Haven, Pa.
Mahoning Iron Works, Brown, Bonnell & Co., Youngstown, O.
Mahoning Valley Iron Co., Youngstown, O.
Middleport Steel & Nail Works, King, Gilbert & Warner, Columbus, O.
Milton Nail Works, C. A. Godcharles & Co., Milton, Pa.
Moorhead Bros. & Co., Allegheny City, Pa.
Mount Hope Iron Co., Somerset, Mass.
New Bedford Copper Co., New Bedford, Mass.
North Chicago Rolling Mill Co., Chicago, Ill., and Milwaukee, Wis.
Northumberland Iron & Nail Works, Van Alen & Co., Northumberland, Pa.
Norton Iron Works, Ashland, Ky.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Oxford Iron & Nail Co., Oxford, M.
Pacific Iron & Nail Co., 9 Beale st., San Francisco, Cal.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Portage Iron Co., (Ltd.), Ducansville, Pa.
Pottstown Iron Co., Pottstown, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Reed Bros. Rolling Mill & Tack & Nail Works, D. L. and F. S. Reed, Brockton, M.
Riverside Iron Works, Wheeling, W. Va.
Robinson Iron Co., Plymouth, M.
Sable Iron & Nail Works, Zug & Co., (Ltd.), Pittsburg, Pa.
Sharon Iron Co., Sharon, Pa.
Sidney, Shepard & Co., Buffalo, N. Y.
South Tredegar Iron Co., Chattanooga, Tenn.
Spaulding Iron Co., Brilliant, O.
Sunbury Nail Works, Sunbury Nail, Bar & Guide Iron Mfg. Co., Sunbury, Pa.
Terre Haute Iron & Nail Works, Terre Haute, Ind.
Top Mill, Wheeling Iron & Nail Co., Wheeling, W. Va.
Towanda Nail Works, R. A. Bostley & Co., Towanda, Pa.
Tremont Nail Co., West Wareham, M.
Union Steel Nail Works, Omaha, Neb.

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Vesuvius Iron & Nail Works, Moorhead, Bro. & Co., Pittsburg, Pa.
Virginia Nail & Iron Works Co., Lynchburg, Va.
Wareham Nail Co., South Wareham, Mass.
Watsontown Nail Works, Watsontown, Pa.
Wellston Steel & Nail Mill Co., Wellston, O.
Western Nail Co., Belleville, Ill.
Weymouth Iron Co., 134 Milk st., Boston, M.
Williamsport Iron & Nail Works, Milton Iron Co., Williamsport, Pa.

Nails—Diamond Screw Point.

Russell & Erwin Mfg. Co., 43 Chambers st., N. Y.; 19 N. 5th st., Phila., and New Britain, Conn.

Nails—Galvanized.

Tiebout, W. & J., 16 Chambers st., N. Y.

Nails—Horse.

Au Sable Horse Nail Co., Keeseville, N. Y.
Capewell Horse Nail Co., (The), Hartford, Conn.
Champion Horse Nail Co., Appleton, Wis.
Cobb & Drew, Plymouth, M.
Essex Horse Nail Co., Essex, N. Y.
Fowler Nail Co., Seymour, Conn.
Globe Nail Co., 154 E. Lake st., Chicago, Ill., and Howard st., Roxbury, M.
Howard Childs & Co., Hamilton Bldg., Pitt'g., Pa.
Judson Mfg. Co., San Francisco, Cal.
Kimbark, S. D., Mich. av., and Lake st., Chicago, Ill.
Livingston Horse Nail Co., 104 Reade st., N. Y.
Mooney, W. M. & Co., 241 E. Lake st., Chicago, Ill., and Au Sable Chasm, N. Y.
Merrick, Pierce & Merrick, Fallston, Pa.
Narragansett Horse Nail Co., Hartford, Conn.
National Horse Nail Co., Vergennes, Vt.
New Haven Nail Co., New Haven, Conn.
Northwestern Horse Nail Co., 232 S. Clinton st., Chicago, Ill.
Pugh & Russell, Stewart Bldg., New York.
Putnam Nail Co., (The), Neponset, P. O. Boston, M.
Rogers, J. & J., Iron Co., Au Sable Forks, N. Y.
Roy, Campbell & Levan, Trenton av., nr. Clearfield st., Phila., Pa.
Saranac Horse Nail Co., Plattsburgh, N. Y.
Scribner, S. S. & Co., 235 E. Lake st., Chicago, Ill.
Small, E. A., 63 S. Canal st., Chicago, Ill.
Union Horse Nail Co., Ashland av., n. 22d st., Chicago, Ill.
United Horse Shoe & Nail Co., (Ltd.), 115 Cannon st., E. C., London, England.
Vought & Williams, 194 West st., N. Y.

Nails—Iron.

American Iron & Steel Works, Jones & Laughlins, (Ltd.), Pitt'g., Pa.
Belfont Iron Works Co., Ironton, O.
Belleville Steel & Iron Nail Works, Belleville, Ill.
Bingham, W. & Co., 146 Water st., Cleveland, O.
Bissell, David S., Pitt'g., Pa.
Boston Steel Nail & Tack Works, Boston, M.
Brierfield Rolling Mill, Brierfield Coal & Iron Co., Brierfield, Ala.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Central Iron Works, Helena Ala.
Chesapeake Nail Works, Chas. L. Bailey & Co., Harrisburg, Pa.
Chess, Cook & Co., Pitt'g., Pa.
Danville Nail & Mfg. Co., Danville, Pa.
Duncannon Iron Co., 122 Race st., Phila., Pa.
Ellis & Lessig Steel & Iron Co., (Ltd.), Pottstown, Pa.
Etna Iron Works, (Ltd.), New Castle, Pa.
Falcon Iron & Nail Co., Niles, O.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Greencastle Iron & Nail Co., Greencastle, Ind.
Harrisburg Nail Works, Harrisburg, Pa.
Johnson, Reuben & Co., Northumberland, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. 88.
Kelly Nail & Iron Co., Ironton, O.
Kimberly, P. L. & Co., Sharon, Pa.
Knoxville Iron Co., Knoxville, Tenn.
Lewisburg Nail Works, Lewisburg, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lock Haven Nail Co., Lock Haven, Pa.
Mahoning Iron Works, Brown, Bonnell & Co., Youngstown, O.
Milton Nail Works, Godcharles & Co., Milton, Pa.
Morris, Wheeler & Co., Phila., Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill., and 151 Insurance Block, Milwaukee, Wis.
Northumberland Iron & Nail Works, Van Alen & Co., Northumberland, Pa.
Norton Iron Works, Ashland, Ky.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Portage Iron Co., (Ltd.), Duncansville, Pa.
Sable Iron & Nail Works, Zug & Co., (Ltd.), Pitt'g., Pa.
Sharon Iron Co., Sharon, Pa.
South Tredegar Iron Co., St. Louis, Mo.
Spaulding Iron Co., Brilliant, O.
Stebbens, Chas. J., 104 Reade st., N. Y.
Terre Haute Iron & Nail Works, Terre Haute, Ind.
Tonawanda Nail Works, R. A. Bostley & Co., Tonawanda, Pa.
Vesuvius Iron & Nail Works, Moorhead, Bro. & Co., Pitt'g., Pa.
Virginia Nail & Iron Works Co., Lynchburg, Va.
Watsontown Nail Works, Watsontown, Pa.
Williamsport Iron & Nail Works, Williamsport, Pa.

Nails—Steel.

American Iron & Steel Works, Jones & Laughlins, (Ltd.), Pitt'g., Pa.
Bellaire Nail Works, Bellaire, O.
Belleville Steel & Iron Nail Works, Belleville, Ill.
Belmont Nail Co., Wheeling, W. Va.
Benwood Iron Works, Wheeling, W. Va.
Bissell, David S., Pitt'g., Pa.
Boston Steel Nail & Tack Works, Boston, M.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Centralia Iron & Nail Works, Centralia, Ill.
Champion Steel & Iron Works, Springfield, O.
Chesapeake Nail Works, Chas. L. Bailey & Co., Harrisburg, Pa.
Chess, Cook & Co., Pitt'g., Pa.
Clinton Rolling Mills, Graff, Bennett & Co., Pitt'g., Pa.
Colorado Coal & Iron Co., South Pueblo, Col.
Danville Nail & Mfg. Co., Danville, Pa.
Duncannon Iron Co., 122 Race st., Phila., Pa.
East Bridgewater Iron Co., Rogers & Sheldon, 240 Congress st., Boston, M.
East Chicago Steel Works, M. M. Towle, Hammond, Ind.
Ellis & Lessig Steel & Iron Co. (Ltd.), Pottstown, Pa.
Harrisburg Nail Works, Harrisburg, Pa.
Hartman Steel Co., Beaver Falls, Pa.
Hollis Tack & Nail Co. (Ltd.), Pitt'g., Pa.
Jackson Steel & Nail Mill Co., Jackson, O.
Jefferson Iron Works, Steubenville, O.
Johnson, Reuben & Co., Northumberland, Pa.
Junction Iron Co., Mingo Junction, O.
Keefer, Horace A. & Co., Kansas City, Mo. 88.
Knoxville Iron Co., Knoxville, Tenn.
La Belle Iron Works, Wheeling, W. Va.
Laughlin Nail Co., Wheeling, W. Va.
Lewisburg Nail Works, Lewisburg, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lock Haven Nail Co., Lock Haven, Pa.
Middleport Steel & Nail Works, King, Gilbert & Warner, Columbus, O.
Millvale Rolling Mill, Graff, Bennett & Co., Pitt'g., Pa.
Milton Nail Works, Godcharles & Co., Milton, Pa.
Morris, Wheeler & Co., Phila., Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill., and 151 Insurance Block, Milwaukee, Wis.
Northumberland Iron & Nail Works, Van Alen & Co., Northumberland, Pa.

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Norton Iron Works, Ashland, Ky.
Portage Iron Co., (Ltd.), Duncansville, Pa.
Riverside Iron Works, Wheeling, W. Va.
Sable Iron & Nail Works, Zug & Co., (Ltd.), Pitt'g., Pa.
Sharon Iron Co., Sharon, Pa.
Spaulding Iron Co., (The), Brilliant, O.
Stebbens, Chas. J., 104 Reade st., N. Y.
Terre Haute Iron & Nail Works, Terre Haute, Ind.
Tonawanda Nail Works, R. A. Bostley & Co., Tonawanda, Pa.
Top Mill, (Wheeling Iron & Nail Co.), Wheeling, W. Va.
Troy Steel & Iron Co., Troy, N. Y.
Union Steel Nail Co., Omaha, Neb.
Watsontown Nail Works, Watsontown, Pa.
Wellston Steel & Nail Mill Co., Wellston, O.
Western Nail Co., Belleville, Ill.
Williamsport Iron & Nail Works, Williamsport, Pa.

Nails—Wire.

Albert Nail Co., 79 Duane st., N. Y.
American Screw Co., Providence, R. I.
American Tack Co., Fairhaven, M.
American Wire Nail Co.,(The),Eastside Wash'n. st., N. of 15th, Covington, Ky.
Birmingham Wire Nail Co., Birmingham, Conn.
Bradford Bros., Brockton, M.
Brooklyn Wire Nail Co.,17 Broadway, N. Y.
Bryant Nail Co., State st., Boston, M., and Syracuse, N. Y.
Chicago Wire Nail Co., Chicago, Ill.
Cincinnati Wire Co., Cincinnati, O., and 12 Cliff st., N. Y.
Clark & Dow, Haverhill, M.
Cobb & Drew, Plymouth, M.
Council Bluffs Tack & Wire Nail Co., Council Bluffs, Iowa.
Cushing, Frank, Brockton, M.
Dunbar, Hobart & Whidden, Whitman, Mass., and 39 Warren st., N. Y.
Excelsior Tack Works, P. Richards & Son, Nicetown, Phila., Pa.
Excelsior Wire Nail Co., Seymour, Conn.
Field, A. & Sons, Taunton, Mass.
Findlay Wire Nail Co., Findlay, O.
Freeman Wire Co., St. Louis, Mo.
Griswold, J. Wool, Troy, N. Y.
Gurney, D. B., Whitman, Mass.
Hartman Steel Co., (Ltd.), Beaver Falls, Pa., and 48 5th av., Pitt'g., Pa.
Hassall, Wm., 63 Elizabeth st., N. Y.
Hoag & Titchener, Binghampton, N. Y.
H. P. Nail Co., Cleveland, O.
Illinois Wire Nail Co., (The), 224-226 N. Union st., Chicago, Ill.
Johnson, Willis, 21 Meadow st.,Waterbury,Conn.
Keith & Trufant, Campello, M.
Lenz Wire Nail Co., Belleville, Ill.
McCosh Iron & Steel Co., Burlington, Iowa.
Meadville Wire Nail Co., Meadville, Pa.
Metropolitan Wire Nail Co., 314 E. 22d st., N. Y.
New Castle Wire Nail Co., New Castle, Pa.
N. Y. Wire Nail Co., Kaufman Bros., 12 1st st., N. Y.
Northwestern Nail & Mfg. Co., Minneapolis, Minn.
Oliver & Roberts Wire Co., (Ltd.), 801 Bingham st., Pitt'g., Pa.
Omaha Barb Wire Co., Omaha, Neb.
Onondaga Steel Works, Sweet's Mfg. Co., Syracuse, N. Y.
Pacific Iron & Nail Co., 9 Beale st., San Francisco, Cal.
Pennsylvania Tack Co., Norristown, Pa.
Perkins Bros., Bridgewater, M.
Phillips, E. & Sons, South Hanover, M., and 1 Warren st., N. Y.
Phillips, Townsend & Co., North Penn Junction, Phila., Pa.
Phœnix Lock Works, 135-137 Halsey st., Newark, N. J.
Pickering, R. S., 306 Master st , Phila., Pa.
Pittsburg Wire Nail Co., 801 Birmingham st., Pitt'g., Pa.
Plymouth Mills, Plymouth, M.
Russell & Erwin Mfg. Co.,New Britain,Conn.,and 45 Chambers st., N. Y.
Salem Wire Nail Co., Salem, O.
Southern Wire Co., St. Louis, Mo.
Standard Nail Co., 1 McGraw Bldg., Detroit, Mich.
Sweet's Mfg. Co., Syracuse, N. Y.
Taunton Tack Co., Taunton, M.
Townsend, W. P. & Co., New Brighton, Pa.
Trufant, W. E., Whitman, Mass.
U. S. Wire Nail Co., 84 Shelby st., Indianapolis, Ind.
Whitney, A. R. & Co., 17 Broadway, N. Y.
Wire Goods Co., Worcester, Mass.

(Zinc) Nails and Tacks.

Simmons & Woodsum, East Braintree, Mass.
Wood, Nathaniel & Co., Plymouth, Mass.

Nail Plate.

Bellaire Nail Works, Bellaire, O.
East Chicago Steel Works, M. M. Towle, Hammond, Ind.
Northumberland Iron & Nail Works, Van Alen & Co., Northumberland, Pa.
Old Colony Iron Co., Taunton, Mass.
Sable Iron & Nail Works, Zug & Co., (Ltd.), Pitt'g., Pa.
Western Nail Co., Belleville, Ill.
Worcester Steel Works, Worcester, Mass.

Nail Rods.

Ausable Horse Nail Co., Keeseville, N. Y.
Star Iron Works, Bowen & Signor, Saranac,N.Y.

Nail Sets.

Conn. Valley Mfg. Co. (The), Centre Brook, Conn.
Elmwood Tool Co., c. Harrison and Sprague sts., Providence, R. I.
Johnson, Wm., Newark, N. J.
Mayhew, H. H. & Co.,Selburne Falls,Mass.
Rumpp, C. F., 116 N. 4th st., Phila., Pa.

Naval Stores.

Bardin & Murdock, Charleston, S. C.
Batchulla & Dill, Stock, Ala.
Baumgardner, Woodward & Co., 38 Delaware av., Phila., Pa.
Billingrath & Redwin, Castleberry, Ala.
Blatz, V., 223 W. Market st., Louisville, Ky.
Blanding, Wm. B., 54-58 Weybosset st., Providence, R. I.
Blocker, C. H. & Co., Brewton, Ala., and Castleberry, Ala.
Blossom, Frederick W., 140 Water st., N. Y.
Bolton Bros., 418 E. Pratt st., Balt., Md.
Bolton, H. & Co., Balt., Md.
Bonneau, O., Mobile, Ala.
Brown, A. P., 1426 F st., Wash'n., D. C.
Cahaba Coal Mining Co., Blocton, Ala.
Calhoun, J. B. & Son, Chunchula, Ala.
Camerden, J. E., 146 Front st., N. Y.
Carney, J. A., Carney, Ala.
Casey, Jno. A., 142 Maiden Lane, N. Y.
Chambers, Calder & Co., 11-12 Exchange Place, Providence, R. I.
Chapman & Soden, 112 Water st., Boston, M.
Chess, Carley Co., Mobile, Ala.; Main st., c. 4th, Louisville, Ky.; Savannah, Ga., and Columbus, Miss.
Clark, E. E., 5 Custom House st., Boston, M.
Cochran, Lyman & Co., 6 Public Landing, Cincinnati, O.
Cooper Creek Mining Co., Dadeville, Ala.
Corner, J. & Son, 534 Union blk., Balt., Md.
Creed, R. W., 121 Chambers st., N. Y.
Degrauw, Aymar & Co., 34 South st., N. Y.
Donovan, J. J. & Co., 130 Maiden Lane, N. Y.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Downing, Buck & Co., Brunswick, Ga.

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Drake Bros., 335 E. Water st., Milwaukee, Wis.
Dutton & Willets, 146 Front st., N. Y.
Filter, Edwin H. & Co., 23 N. Water st., Phila., Pa.
Fullman & Purcell, Gordon, Ala.
Gay, J. P. & Co., 8th st., c. Evans, Cincinnati, O.
Gresham & Pearce, Gondola, Ala.
Haff, S. S. & Co., 155 Maiden Lane, N. Y., and ft. Dikeman st., B'klyn, N. Y.
Harrington, S., 188 State st., Boston, M.
Hart & Aiken, 58 S. Water st., New Bedford, M.
Hayne, H. J., 164 Front st., N. Y.
Hinckley Bros. & Co., 71 Commercial st., Boston, M.
Hite, W. W. & Co., 176-178 4th st., Louisville, Ky.
Hughes, Carter & Co., Meridian, Miss.
Johnson, H., Wilmington, N. C.
Johnson, Hammond & Co., 152 Front st., N. Y.
Larendon, Michael W., 159 Front st., N. Y.
Lazarus, E. M. & Co., 27 S. Gay st., Balt., Md.
Lee & Lawrence, Savannah, Ga.
Leonard, J. S., 4 India st., Boston, M.
Lott, M. C., Chunchula, Ala.
Lott, T. A., Citronelle, Ala.
Longley, Garlick & Co., Front and Suspension Bridge, Cin., O.
Lucien, J. C., Savannah, Ga.
McCay & Jackson, Canoe Station, Ala.
McDonald, A. & Co., 81 W. Pearl st., Cin., O.
McNeill, W., Savannah, Ga.
Middleton & Co., Charleston, S. C.
Mills, Zophar, Jr., 146 Front st., N. Y.
Murchison, D. R. & Co., Wilmington, N. C.
Norwood, G. A. & Co., Charleston, S. C.
Oakes, J., 156 Maiden Lane, N. Y.
Owell, J. C. & Co., St. Elmo, Ala.
Parker & Peele, 118 S. Gay st., Balt., Md.
Patterson, Downing & Co., Savannah, Ga.; Mobile, Ala.; Charleston, S. C.; Wilmington, N. C., and 154 Front st., N. Y.
Peacock, Hunt & Co., Savannah, Ga.
Perry, G. W., 159 Main st., Cin., O.
Pinney & Burnett, Castleberry, Ala.
Pitman Bros., Charleston, S. C.
Potter, Gilbert & Co., 164 Front st., N. Y.
Prentice, G. G., 108 S. Water st., Phila., Pa.
Prince, C. J. & Co., 2 Central whf., Boston, M.
Rasmussen, P., 1916 Aliceanna st., Balt., Md.
Rich, C. W., Gondola, Ala.
Rich & Woodland, Lumberton, Ala.
Rose, Whitehurst & Co., 238 Smith's whf., Balt., Md.
Rowley, Edw. H., 46 N. Front st., Phila., Pa.
Seaman, R. F. & Co., 38 Burling Slip, N. Y
Shotter, S. O. & Co., Wilmington, N. C.
Shotter, S. P. & Co., Savannah, Ga.
Simpson & Vizard, New Orleans, La.
Smith, Frederick M., 28 South st., N. Y.
Smith, G. E. & Co., 7 Central whf., Boston, M.
Smith's, John, Son, 146 Front st., N. Y.
Southern Naval Stores & Supply Co., Mobile, Ala.
Sprunt, A. & Son, Charleston, S. C., and Savannah, Ga.
Standard Oil Co., Louisville, Ky.
Taylor, H. C. & Co., Bay Minette, Ala.
Taylor, J. W. & Co., Citronelle, Ala.
Thompson, J., Citronelle, Ala.
Toler, W. D., St. Elmo, Ala.
Torras, R., Brunswick, Ga.
Trumbo, Henson & Co., Charleston, S. C.
Tunstall & Carney, Carney, Ala.
Turton's, John, Sons, 133 Maiden Lane, N. Y.
Va. & Ala. Mining & Mfg. Co. Birmingham, Ala.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Watson, G. E., Savannah, Ga.
Webb, James A., 165 Pearl st., N. Y.
Wheedbee & Dickinson, 35 S. Gay st., Balt., Md.
Whilden, W. W. & Co., Charleston, S. C.
Williams, J. P., Savannah, Ga.

Netting—Wire.

Clinton Wire Cloth Co., Clinton, Mass.
Darby, Edward & Sons, 233 Arch st., Phila., Pa.
Gilbert & Bennett Mfg. Co., (The), 42 Cliff st., N. Y.
Hopkins & Co., N. Y. Steam Wire Works, 90 W. B'way., N. Y.
Needles, Joseph A., 54 N. Front st., Phila., Pa.
Toledo Wire & Iron Works, 242 Summit st., Toledo, O.

*Newspapers.

American Mfg. & Iron World, Pitt'g., Pa. 44.
Modern Light & Heat, 178 Devonshire st., Boston, M. 59.
Railway Age, 205 La Salle st., Chicago, Ill. 45.
Railway Register, Turner bldg., St. Louis. Mo. 35.

Nippers.

Barnard, Son & Co., 78 Worth st., N. Y.
Chambers Bros. & Co., Phila., Pa.
Cincinnati Tool Co., (The), Cincinnati, O.
Ellrich Hardware Mfg. Co., (The), Plantsville, Conn.
McCoy & Sanders, 26 Warren st., N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Pratt Mfg. Co., 23 W. 1st st., S. Boston, M.

Nitro-Glycerine.

Dittmar Powder Works, 1542 Madison av., N. Y.
Hecla Powder Co., (The), 239 B'way., N. Y.
Lake Shore Nitro-Glycerine Co., Paintersville, O.
Rock Glycerine Co., Bradford, Pa.
Thomas, H. H., Bay City, Mich.

Nozzles.

American Steam Gauge Co., 36 Chardon st., Boston, M.
Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Lewis, C. P., Catskill, N. Y.
Shaw, Thomas, 915 Ridge av., Phila., Pa.
Vogel, Wm. & Bros., 41 S. 9th st., B'lyn., E. D., N.Y.
Wilson, F. C. & Co., 239 Lake st., Chicago, Ill.

Nozzles—Noise Quieting.

Shaw, Thos., 915 Ridge av., Phila., Pa.

Nuts—Sleeve.

Alexander, A. A., Leetoria, O., and 113 3d av., Pitt'g., Pa.

Nuts—Fibre Screw.

Vulcanized Fibre Co., Wilmington, Del., and 14 Dey St., N. Y. 96.

Nut Locks.

Iron City Nut Lock Co., Wood st., and 3d av., Pitt'g., Pa.
Jordan, Wm. A., 475 S. Rampart st., New Orleans, La.
Metcalf, Paul & Co., Liberty st., Pitt'g., Pa., and 64 Clinton st., Chicago, Ill.
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
Nat. Lock Washer Co., Newark, N. J.
Niagara Nut Lock Mfg. Co., Buffalo, N. Y.
Peerless Mfg. Co., 17th and Magazine sts., Louisville, Ky.
Ruffner, Dunn & Co., Schuylkill Falls, Phila., Pa.
Stark Nut Lock Co., Adams Ex. Bldg., Chicago, Ill.; Stewart Bldg., N. Y., and 918 N. 2d st., St. Louis, Mo.
Verona Tool Works, Emerson, Paul & Co., No. 1 McCance blk., Pitt'g., Pa.
Vulcanized Fibre Co., Wilmington, Del., and 14 Dey st., N. Y. 96.

Nut Rods.

New Haven Rolling Mill Co., New Haven, Conn.

Nut Shapes.

Ætna Nut Co., Southington, Conn.

Oakum.

Alden, H. L., Camden, Me.

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Baltimore Oakum Mfg. Co., 265 S. B'way., Balt., Md,
Baumgardner, Woodward & Co., 38 Delaware av., Phila., Pa.
Boston Cordage Co., 61 Broad st., Boston, M.
Boston Oakum Co., 74-76 Commercial st., Boston, M.
Boston Oakum Works, Chatham, Conn.
Borz, C. W. & Co., 103 Thames st., Balt., Md.
Carpenter, George B. & Co., 208 S. Water st., Chicago, Ill. 31.
Channon, H. Co., 210 S. Water st., Chicago, Ill.
Childs, H. L. & Co., 8 Smithfield st., Pitt'g., Pa.
Davey, W. O. & Sons, 47 South st., N. Y., and 164 Laidlaw av., Jersey City, N. J.
De Grauw, Aymar & Co., 34-35 South st., N. Y.
Elizabethport Steam Cordage Co., 46 South st., N. Y. 20.
Filter, Edwin H. & Co., 23 N. Water st., Phila., Pa.
Fulton, Bollman & Co., 111 Water st., Pitt'g., Pa.
George Stratford Oakum Co., 166 Corneilson av., Jersey City, N. J.
Hite, W. W. & Co., 176-178 4th st., Louisville, Ky.
Hinckley Bros. & Co., 71 Commercial st., Boston, M.
Maryland Oakum Mfg. Co., Cross st., c. Race, Balt., Md.
Massasoit Mfg. Co., Fall River, M.
Mill's, B. Sons, R. R. av., c. Academy, Jersey City, N. J., and 52 South st., N. Y.
Sheppard & Co., 54 Kilby st., Boston, M.
Slover & Tyler, 47 South st., N. Y.
Soule, C. S., Waldoboro, Me.
Stratford, Geo., 66 South st., N. Y.
Suffolk Cordage Co., 56-60 Commercial st., Boston, M.
Wall's, Wm. Sons, 113 Wall st., N. Y.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Weeks, S. F. & Co., 18th st., c. Harrison, San Francisco, Cal.
Whiton, M. F. & Co., 31 Commercial st., Boston, M.
Woodford, N. B., Balt., Md.

Oars.

Anderson, J., Fine, N. Y.
Andrews, D., Bangor, Me.
Baines, J. A., 153 E. 13th st., N. Y.
Buzzell, C., Pittston, Me.
Carleton, G. E., Oldtown, Me.
Cleary, E. M. & Co., 1707 Thames st., Balt., Md.
Cushing & Co., Bangor, Me.
De Grauw, Aymar & Co., 34 South st., N. Y.
Donoghue, Timothy, Newburgh, N. Y.
Forbes, John, Plainwell, Mich.
Hinckley Bros. & Co., 56-58-60 Commercial st., Boston, M.
Kingsbury, E. B., 154 South st., N. Y.
La Due, John, East Saginaw, Mich., and Montpelier, O.
Lee, G. N., Delta, Mich.
New York Boat Oar Co., (The), 69 West st., N. Y.
Page, E. W. Co., 69 West st., N. Y.
Phinney Hurlbert & Co., East Saginaw, Mich.
Rushton, J. H., Canton, N. Y.
Shaw, T. J. & Co., 166-168 Commercial st., Boston, M.
Swan, W. D., New Bedford, M.
Taylor, W. L., Orono, Me.
Von Behren & Shaffer, Stryker, O.
Vosburg & Cooper, Saranac, Mich.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Warren Oar Co., Warren, Ind.
Wells, J., Albion, Pa.
Wells, T. B. & A. J., Devall's Bluff, Ark.
Wilsey, J. D. & Son, Jersey City, O.

Oil—Axle.

Baum's Castorine Co., Syracuse, N. Y.
Kellogg, E. H., 17 Cedar st., N. Y.
Lovell, Tracy & Co., 71 Asylum st., Hartford, Conn.
Provident Oil Co., 106 N. Water st., Phila., Pa.
Union Grease Co., 374 Atlantic av., Boston, M.

Oil Box—Covers.

Baker Adjustable Bearing Co., 35 Wall st., N. Y.
Dodge & Bliss Box Co., Jersey City, N. J.
Vulcanized Fibre Co., Wilmington, Del., and 14 Dey st., N. Y. 96.

Oil—Cordage.

Reyusids, A. N. & Co., 382 Atlantic av., Boston, M.
Winslow, W. & Co., 42-48 Batterymarch, Boston, M.

Oil—Cotton Seed.

American Cotton Oil Co., St. Louis, Mo.
Anderson Oil & Fertilizer Co., Anderson, S. C.
Athens Cotton Seed Oil Mill, Athens, Ga.
Atlanta Cotton Seed Oil Mills, Atlanta Ga.
Catawba Oil Co., Chester, S. C.
Culbertson, Gasten & Co., Paris, Tex.
Gibson & Co., Columbia, S. C.
Greenville Cotton Seed Oil Co., Greenville, S. C.
Lathrop, W. D. & Co., Elizabeth City, N. C.
Luling Mfg. Co., Luling, Tex.
McIlhenny, Oliver, Athens, Ga.
Nashville Cotton Seed Oil Co., Nashville, Tenn.
Planters' Oil Mill Co., Memphis, Tenn.
Rome Oil Mills and Fertilizer Co., Rome, Ga.
Tassey, McCullough & Co., Sherman, Tex.

Oil—Creosote.

Hanson, Ludwig, Wilmington, N. C.

Oil—Fish.

Bellow, Pasquith & Squires, Chase's whf., Va.
Brown, O. A., Accomac C. H., Va.
Burk Oil & Chemical Co., 205 E. Kinzie st., Chicago, Ill.
Clark, Geo. H., Sandy Bottom, Va.
Dey Bros., Beaufort, N. C.
Dodd, Andrew, W. & Co., Gloucester, M.
Fidelity Mfg. Co., 1106 Noble st., Phila., Pa.
Luce Bros., East Lynn, M.
Noyes Neck Fish Oil Co., Mystic Bridge, Conn.
Robinson, Benj. & Co., East Gloucester, M.

Oil—Lard.

Cook Bros., 159 Front st., N. Y.
Davies, J. P., Dayton, O.
Davis Oil Co., 87½ Water st., N. Y.
Fairbank, N. K. & Co., 59 Wabash av., Chicago, Ill.
Hamnil & Gillespie, 240 Front st., N. Y.
Harbaugh, A. G. & Co., 34-36 River st., Cleveland, O.
Howe Lard Oil Mfg. Co., 93 Front st., N. Y.
Janton, G. & Co., Columbus, O.
Lanley, J. W. & Co., St. Louis, Mo.
Macy's, Josiah, Sons, 191 Front st., N. Y.
Molony, Michael, 604 Berke st., Phila., Pa.
Page, B. V. & Co., 44-54 Erie st., Chicago, Ill.
Pool, John H. & Macy, 78 Broad st., N. Y.
Squier, Lucien B., 159 Front st., N. Y.

Oil—Linseed.

Atlantic White Lead & Linseed Oil Co., 287 Pearl st., N. Y.
Bailey, Isaac, Gilman, Ill.
Boone Linseed Oil Co., Boone, Iowa.
Burnham, J. R. & Co., Burlington, Iowa.
Campbell & Thayer, 87 Maiden Lane, N. Y.
Cassell, Forney & Co., Mansfield, O.
Cedar Rapids Linseed Oil Co., Cedar Rapids, Iowa.
Chicago White Lead & Oil Co., Green and Fulton sts., Chicago, Ill.
Cincinnati Linseed Oil Co., (The), 9 W. Front st., Cincinnati, O.
Clark, H. S. & Co., Mendota, Ill.
Cleveland Linseed Oil Co., Cleveland, O.
Dean, J. A. & Co., 181 Front st., N. Y.
Defrees, John H. & Son, Goshen, Ind.
Des Moines Linseed Oil Co., Des Moines, Iowa.
Detroit Linseed Oil Co., Detroit, Mich.
Dubuque Linseed Oil Co., Dubuque, Iowa.
Empire City Linseed Oil Co., 1285 B'way, N. Y.

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Foos Linseed Oil Co.,(The), Springfield, O.
Forney, E. J. & Co., Macesfield, O.
Gabel, John L., Boyertown, Pa.
Gibbs, A. B. & L. H., Troy, N. Y.
Griswold Linseed Oil Co.,(The), 243 Superior st., Cleveland, O.
Hanford, Hall & Co., Chicago, Ill.
Heimer & Hipple, Des Moines, Iowa.
Jagger & Simpson, Burlington, Iowa.
Jay & Co., Saint Mary's, O.
Kankakee Linseed Oil Co., Kankakee, Ill.
Kansas City White Lead & Linseed Oil Co.,Kansas City, Mo.
Kellogg & McDougall, Buffalo, N. Y.
King, Jos., Pittstown, N. J.
La Crosse Linseed Oil Co., La Crosse, Wis.
Louis, Henry & Co., 101 Maiden Lane, N. Y.
Louisville Linseed Oil Works, Louisville, Ky.
Mankato Linseed Oil Co., Mankato, Minn.
Metzger Bros. & Co., Toledo, O.
Minnesota Linseed Oil Co., Minneapolis, Minn.
Niagara Linseed Oil Works, Buffalo, N. Y.
Pope, H. L. & Co., Dayton, O.
Preston, Thos. J., Newark, N. J.
Raynolds, C. T. & Co., 106-108 Fulton st., N. Y.
St. Paul Linseed Oil Co., St. Paul, Minn.
Sweetson, Lyons & Co., Marion, Ind.
Thompson & Co., Allegheny, Pa.
Thresher & Co., Dayton, O.
Toledo Linseed Oil Co., Toledo, O.
Trader, I. F., Xenia, O.
Wood, Archer & Co., Dayton, O.

Oil—Lubricating & Machinery.

Acme Oil Co., 26 B'way, N. Y.
Aiken, Geo. W., 81 Jennings av.,Cleveland, O.
Albany Lubricating Compound and Cup Co., 313 West st., N. Y.
Allis, Edward P. & Co., Milwaukee, Wis.
Am. Cotton Seed Co., 68 Cotton Exchange, N. Y.
Am. Oil Co., 45 B'way, N. Y.
American Lubricating Oil Co., Cleveland, O.
Anchor Oil Co., 96 Maiden Lane, N. Y.
Ansoldi, Alexander P., 428 Water st., N. Y.
Astral Refining Co., Oil City, Pa.
Atlantic Refining Co.,(The), 125 Arch st., Phila., Pa.
Backus, H. M. Oil Co., 52-56 Norton st., Buffalo, N. Y.
Baker, S. T. & Co., 295 Pearl st., N. Y.
Belden, A. G. & Co., 145 Maiden Lane, N. Y.
Binghampton Oil Refining Co., 80 Cortlandt st., N. Y.
Bliven, Carrington & Co., 257 Front st., N. Y.
Bluxome, Jos. A., 48 Front st., N. Y.
Borne, Scrymser & Co., 80 South st., N. Y.
Brooks Oil Co., 356 Euclid av., Cleveland, O.
Brown, Thomas, Oil Co., Erie, Pa.
Burk Oil Co., 27 Water st., N. Y.
Burk Oil & Chemical Co., 205 E. Kinzie st., Chicago, Ill.
Burke, Russell W., 128 Pearl st., N. Y.
Burton, Chas. W., 1 Beaver st., N. Y.
Bush & Denslow Mfg. Co., 130 Pearl st., N. Y.
Buxton, Heins & Co., 13 Spruce st., N. Y.
Callahan, Geo. & Co., 128 Maiden Lane, N. Y.
Carman, Benj. T., 156 Maiden Lane, N. Y.
Carpenter & Co., Geo. B., 202 S. Water st., Chicago, Ill. 31.
Central Refining Co., (Ltd.), 26 Broadway, N. Y.
Champion City Oil Co.,Springfield, O.
Chard, Richard J., 96 Pine st., N. Y.
Chester Oil Co., (The), 34 S. Del. av., Phila., Pa.
Chicago Lubricant Mfg. Co., Chicago, Ill.
Chicago White Lead & Oil Co., Green and Fulton sts., Chicago, Ill.
Clark, James S., 143 Maiden Lane, N. Y.
Clarkson & Ford, 224 Front st., N. Y.
Colgan Mfg. Co., 234 West st., N. Y.
Colorado Oil Co., 280 Broadway, N. Y.
Consolidated Tank Line Co., Cincinnati, O.
Cook, Adam, 313 West st., N. Y.
Cook, Nehemiah B., 148 Front st., N. Y.
Cooke Bros., 159 Front st., N. Y.
Craighead, Jesse V. A., 257 Front st., N. Y.
Crew, Levick & Co., 113 Arch st., Phila., Pa.
Davis Oil Co., 10 Old Slip, N. Y.
Dean, J. A. & Co., 181 Front st., N. Y.
Delano's, George, Sons, N. Y.
Dennison, Geo. M., New London, Conn.
Devoe Mfg. Co., 75 New st., N. Y.
Donald, James & Co., 124 Maiden Lane, N. Y.
Dorr's, J. O. Son Co., 209 Franklin st., N. Y.
Doyle, Laughlin, 451 W. 32d st., N. Y.
Dreher Mfg. Co., 188 Pearl st., N. Y.
Dubois & Trantum, 119 South st., N. Y.
Duncan, Watson & Co., Dashwood House, New Broad st., E. C., London, England.
Eagle Oil Co., 26 Broadway, N. Y.
Ellis, John & Co., 157 Chambers st., N. Y.
Emery & Co., (Ltd.), 23 7th st., Pitt'g., Pa.
Empire Refining Co., (Ltd.), 26 Broadway, N. Y.
Faul, Wm. J., 120 Liberty st., N. Y.
Feeney, Wm. P., 14 Centre st., N. Y.
Fiske Bros., 61 Water st., N. Y.
Flanders, Chas. N., 163 Maiden Lane, N. Y.
Foote, Herbert W., 427 E. 25th st., N. Y.
Frazer Lubricator Co., 73 Murray st., N. Y., and 81 E. Superior st., Chicago, Ill.
Freeman, Robert J., 7 N. William st., N. Y.
Fuller, Aug. P. & Co., Portland, Me.
Galena Oil Works, (Ltd.), Franklin, Pa.
Gallaway, Geo. W., 322 Pearl st., N. Y.
George, E. & Co., 82 South st., N. Y.
Gibbs, A. B. & Co., 172 Pearl st., N. Y.
Globe Linseed Oil Co., 43 Front st., N. Y.
Globe Lubricating Co., 108 Maiden Lane, N. Y.
Globe Oil Co., 1 Canal st., Grand Rapids, Mich.
Green, Bernard H., 48 Jefferson st., N. Y.
Hadden, James C., 259 Front st., N. Y.
Haggerty & Co., 126 Maiden Lane, N. Y.
Hall, John S., 66 Cortlandt st., N. Y.
Hansen, Ludwig, Wilmington, Del.
Harris, A. W. & Co., 82 Cortlandt st., N. Y.
Hawkins, Henry B., 151 Cedar st., N. Y.
Hoffman Lubricator & Oil Co., Binghampton, N. Y.
Holmes & Adams, Buffalo, N. Y.
Hopkins & Rossell, 80 Cliff st., N. Y.
Howe Lard Oil Mfg. Co., 93 Front st., N. Y.
Hisley, Doubleday & Co., 229 Front st., N. Y.
Jenney, S. & Son, 96 Maiden Lane, N. Y.
Johnson, H. J., 530 Water st., N. Y.
Kellogg, E. H. & Co., 244 South st., N. Y.
Ketcham, Frederick O., 113 Maiden Lane, N. Y.
Kiely, John M., 147 Maiden Lane, N. Y.
Lamson, Jno. S. & Bro., 77 Maiden Lane, N. Y.
Leib Lubricating Co., Buffalo, N. Y.
Leonard & Ellis, 157 Chambers st., N. Y.
Lewis, Harold R. & Co., 115 N. 2d st., Phila., Pa.
Lombaert Mfg. Co., Phila., Pa.
Lonergan, J. E. & Co., Phila., Pa.
Lovell, Tracy & Co.,71 Asylum st.,Hartford,Conn.
Lustral Oil Co., 156 Maiden Lane, N. Y.
McGoey & King, 18 Broadway, N. Y.
Macbeth, James & Co., 128 Maiden Lane, N. Y.
Macy's, Josiah, Sons, 191 Front st., N. Y.
Main Bros., 61 South st., N. Y.
Mandel, A. G. & Co., 251 Front st., N. Y.
Manhattan Oil Co., 51 Front st., N. Y.
Marcus, James A., Jr., 110 Pearl st., N. Y.
Mason, E. Porter, 221 Front st., N. Y.
Miners' Oil & Supply Co., 43 Front st., N. Y.
Moore, Foster & Co., 154 Maiden Lane, N. Y.
Morton, Henry J., 105 Walker st., N. Y.
Morton, Howard, 605 Smithfield st., Pitt'g., Pa.
Mystic Oil Co., 75 Maiden Lane, N. Y.
National Oil Works & Mill Supply Co., 58 Front st., N. Y.
National Transit Co., 26 B'way, N. Y.
N. Y. Lubricating Oil Co., 231 Front st., N. Y.
N. Y. Refining Co., 141 Maiden Lane, N. Y.
Noe, John H., 154 Maiden Lane, N. Y.
Ocean Oil Co., 3 Beaver st., N. Y.
Oil Seeds Pressing Co., 29 Water st., N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Parks, Nathaniel O., 61 Front st., N. Y.
Parks, Newton A., 61 Front st., N. Y.
Parsons, A. T. & Co., 48 Maiden Lane, N. Y.
Pennsylvania Oil Co., (Ltd.), 182 Front st., N. Y., and 40 Dearborn st., Chicago, Ill.
Phœnix Oil & Cement Co., Front and Market sts., Phila., Pa.
Platt & Washburn Refining Co., 243 Front st.,N.Y

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Polar Oil Co., 12 B'way., N. Y., and 194 Wash'n. st., Boston, M.
Post, E. L. & Co., 10 Peck st., N. Y.
Pratt Mfg. Co., 26 B'way, N. Y.
Provident Oil Co., 106 N. Water st., Phila., Pa.
Pulver, Peter & Sons, 257 West st., N. Y.
Quaker City Oil Co., 125 Maiden Lane, N. Y.
Reed, Hall & Hewlett, 18 Platt st., N. Y.
Reinhard, F. H. & Co., 73 Pearl st., N. Y.
Robinson, Wm. C. & Son, 217 South st., Balt., Md.
Signal Oil Works, Franklin, Pa.
Smith & Nichols, 143 Front st., N. Y.
Sone & Fleming Mfg. Co., (Ltd.), 26 B'way, N.Y.
Southern Cotton Oil Co., 78 Broad st., N. Y.
Southwick Bros., 4 Cedar st., N. Y.
Squier, Lucien B., 159 Front st., N. Y.
Standard Lighting Co., (The), 153 Seneca st., Cleveland, O.
Standard Oil Co. of N. Y., 26 B'way, N. Y.
Standard Oil Co., Louisville, Ky., and Cleveland, O.
Steck & Co., 233 South st., N. Y.
Sterling Oil Co., 176 B'way, N. Y.
Stevenson Bros. & Co., 132 S. 2d st., Phila., Pa.
Stuart, D. A. & Co., 8 State st., Chicago, Ill.
Sturges & Westcott, 192 West st., N. Y.
Swain, F. F. & Co., 278 S. Water st., (room 1), Chicago, Ill.
Swan & Finch, 151 Maiden Lane, N. Y.
Swift, E. W. & Co., 29 Ferry st., N. Y.
Titusville Oil Co., 75 Maiden Lane, N. Y.
Taussig, S., 43 River st., Chicago, Ill.
Todd, Geo. W., 64 Dey st., N. Y.
Turkey Red Oil Mfg. Co., 14 Dey st., N. Y.
Union Grease Co., 374 Atlantic av., Boston, M.
Urquhart, John S., 46 Cortlandt st., N. Y.
Union Oil Co., Cleveland, O.
Union Tank Line, 26 B'way, N. Y.
Upson's Oil & Soap Co., Parkersburg, W. Va.
Vacuum Oil Co., 96 Water st., N. Y.; 30 Exchange st., Rochester, N. Y., and 207-208 Home Ins. Bldg., Chicago, Ill.
Valvoline Oil Works, 157 Chambers st., N. Y.
Walden, James H., 29 Hubert st., N. Y.
Waters Pierce Oil Co., 600 N. 4th st., St. Louis, Mo.
Webster & Co., Hartford, Conn.
Wilkin, Leffert G., 5 Cedar st., N. Y.
Winn, Wm. R., 143 Maiden Lane, N. Y.
Zibell, Julius A., 3 Peck st., N. Y.

Oil—Neat's Foot.

Balder, Adamson & Co., 730 Market st., Phila., Pa.
Bullock, John & Son, Balt., Md.
Hewett, F. H. & Son, Scranton, Pa.
James & Bro., Cincinnati, O.
Mich. Carbon Works, Detroit, Mich.
Pittsburgh Glue Co., (Ltd.), P. O. Box 960, Pitt'g., Pa.
Quincy Fertilizing & Rendering Co., Quincy, Ill.
Wahl Bros., 238-240 Randolph st., Chicago, Ill.
Williamsport Soap Works, Williamsport, Pa.

Oil—Machinery.

Aiken, Geo. W., 81 Jennings av., Cleveland, O.
Auburn Oil Co., (The), Auburn, N. Y.
Backus, H. M., Oil Co, 52-56 Norton st., Buffalo, N. Y.
Cook, Adam, 313 West st., N. Y.
Dreher Mfg., Co., (The), 87 Platt st., N. Y.
Howe Lard Oil Mfg. Co., 93 Front st., N. Y.
Johnson, H. J., 530 Water st., N. Y.
Longman & Martinez, 207 Pearl st., N. Y.
Lovell, Tracy & Co., 71 Asylum st., Hartford, Conn.
Paine, Rufus J., Mansfield, M.
Provident Oil Co., 106 N. Water st., Phila., Pa.
Robinson, Wm. C. & Son, 81 South st., Balt., Md.
Standard Lighting Co., 151-153 Seneca st., Cleveland, O.
Union Grease Co., 374 Atlantic av., Boston, M.
Webster & Co., Hartford, Conn.
Western Oil Co., Bloomington, Ill.
Van Duzen & Tift, Cincinnati, O. **57.**
Whittemore Bros. & Co., 174-180 Lincoln st., Boston, M.

Oil Feeders.

Detroit Lubricator Co., Detroit, Mich.

Oil Stone Manufacturers.

Chase, Geo. E., E. 107th st., and 1st av., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Pike, A. T. Mfg. Co., Pike Station, N. H.

Oilers.

Bridgeport Brass Co., 19 Murray st., N. Y., and Bridgeport, Conn.
Chalk, T. C. & Co., 21 Slater av., Pawtucket, R. I.
Dickson Mfg. Co., Scranton, Pa.
Goodyear's India Rubber Glove Mfg. Co., 505 B'way, N. Y.
Hammer & Co., Branford, Conn.
Harlow Lubricator Co., Brockton, M.
Henderson, W. G. & Co., Pitt'g., Pa.
Hero Fruit Jar Co., Gaul st., c. E. Adams, Phila., Pa.
Huebel, John, Green st. & N. J. R. R. av., Newark, N. J.
Ironclad Mfg. Co., 22 Cliff st., N. Y.
Lowell Oiler Co., Lowell, M.
McGraw, Henry, 7 Fort st., E. Detroit, Mich.
Machinist Supply Co., 216 Lake st., Chicago, Ill.
N. Y. Screw Top Works, 21 Vandewater st., N. Y.
Pedrick & Ayer, Phila., Pa. **60.**
Peerless Mfg. Co., 34 Murray st., N. Y.
Wilson, F. C. & Co., 239 Lake st., Chicago, Ill.

Omnibus Builders.

Bothe, H. H., St. Louis, Mo.
Brownell & Wright Car Co., 2300 B'way, St. Louis, Mo.
Feigel Car Co., 108 Wall st., N. Y.
Gilbert Car Mfg. Co., 3 Broad st., N. Y.
Harlan & Hollingsworth Co., 111 B'way, N. Y.
Horton & Co., 53 E. 5th st., Cincinnati, O.
Jackson & Sharp Co., 115 B'way., N. Y.
La Mothe Mfg. Co., 60 Liberty st., N. Y.
Lehigh Car Mfg. Co., 91 Liberty st., N. Y.
Miles, Robt. M., 15 Broad st., N. Y.
National Vehicle Co., Racine, Wis.
Pullman's Palace Car Co., 15 Broad st., N. Y.
Stephenson, John Co., (Ltd.), 47 E. 27th st., N. Y.
Union Omnibus & Wagon Mfg. Co., 54 Bank st., Cincinnati, O.
U. S. Rolling Stock Co., 35 Wall st., N. Y.
U. S. Tube Rolling Stock Co., 35 Wall st., N. Y.

Packing—Anti-Friction.

American Steam Packing Co., 51 Kilby st., Boston, M.

Packing—Asbestos.

Asbestos Packing Co., (The), 169 Congress st., Boston, M., and 33 John st., N. Y.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Chalmers-Spence Co., 419 8th st., N. Y. **iv.**
Gilmour, Robert M., 82 John st., N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
John's, H. W. Mfg. Co., 87 Maiden Lane, N. Y., and 175 Randolph st., Chicago, Ill.

Packing—Condenser.

Vulcanized Fibre Co., Wilmington, Del., and 14 Dey st., N. Y. **96.**

Packing—Cork.

Thompson & Norris, 10-34 Prince st., B'kln., N.Y.

Packing—Engine.

Asbestos Packing Co., (The), 169 Congress st., Boston, M.

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Chesterton, A. W. & Co., 49 India st., Boston, M.
Garlock, Crandall & Co., Palmyra, N. Y.

Packing—Eureka.

Hine & Robertson, 45 Cortlandt st., N. Y. **82.**

Packing—Gum.

Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Canfield Mfg. Co., 125 N. 7th st., Phila., Pa
Trenton Rubber Co., Trenton, N. J
Glanding, Jas. & Co., 115 Queen st., Phila., Pa.

Packing—Locomotive Cylinder.

Flanders, L. B., Machine Works, Phila., Pa.
Silver Lake Co., 82 Chauncey st., Boston, M.
Wellington, H. W., 82 Chauncey st., Boston, M.

Packing—Metallic.

Deeds Metallic Packing Co., 185 Dearborn st., Chicago, Ill.
Dickson Mfg. Co., Scranton, Pa.
Jerome, C. C., 35 S. Canal st., Chicago, Ill.
Katzenstein, L. & Co., 357 West st., N. Y.
Martin, Thos., 161 Sycamore st., Detroit, Mich.
Sleeper Mfg. Co., 14-18 S. Canal st., Chicago, Ill.
Thatcher Metallic Packing Co., La Salle and Indiana sts., Chicago, Ill.
United States Metallic Packing Co., 267 S. 4th st., Phila., Pa.

Packing—Piston.

Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Brandon, J., 390 11th av., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Gutta Percha & Rubber Mfg. Co., (The), c. Warren and Church sts., N. Y.
Home Rubber Co., Trenton, N. J.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **V.**
Pollock, Alex., 212 West st, N. Y. **32.**
Trenton Rubber Co., Trenton, N. J.
Winans Packing Mfg. Co., Springfield, Vt.

Packing—Plumbago.

Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Home Rubber Co., Trenton, N. J.
Trenton Rubber Co., Trenton, N. J.

***Packing—Railroad.**

Hine & Robertson, 45 Cortlandt st., N. Y. **82.**

Packing—Rubber.

Akron Rubber Works, Akron, O.
Bailey, Farrel & Co., 619 Smithfield st., Pitt'g., Pa.
Boston Belting Co., 256-260 Devonshire st., Boston, M.
Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Combination Roll & Rubber Co., 62 Astor House, N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn
Greeley, E. S. & Co., 5 Dey st., N. Y.
Gutta Percher & Rubber Mfg. Co., (The), 35 Warren, st., N. Y., and 159 Lake st., Chicago, Ill.
Home Rubber Co., Trenton, N. J.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **V.**
Revere Rubber Co., 63 Franklin st., Boston, M.
Star Rubber Co., Trenton, N. J.

Packing—Steam.

Acme Covering Works, 82 John st., N. Y.
Ainsworth Boiler Covering Co., 17 Broadway, N. Y.
Alexander & Co., 308 Robinson st., Allegheny, Pa.
Allis, Edward P. & Co., Milwaukee, Wis.
American Multiple Fabric Co., Olneyville, R. I.
American Oak Leather Co., 141 Main st., Cincinnati, O.
American Steam Packing Co., 51 Kilby st., Boston, M.
Asbestos Felting Works, 101 Maiden Lane, N. Y., and 169 Congress st., Boston, M.
Asbestos Packing Co., 33 John st., N. Y., and 169 Congress st., Boston, M.
Atlanta Rubber Co., 16 Decatur st., Atlanta, Ga.
Atwood & McCoffrey, 50 3d av., Pitt'g., Pa.
Ayres, N. G., 167 Lacock st., Allegheny, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pitt'g., Pa.
Balance Valve & Steam Piston Packing Co., 237 Broadway, N. Y.
Baldams Packing, 116 John st., N. Y.
Bay State Belting Co., 156 Devonshire st., Boston, M.
Beggs, James & Co., 9 Dey st., N. Y.
Birkett, Jas. W., 67 Smith st., Brooklyn, N. Y.
Bogett, R. H., 116 John st., N. Y.
Boston Belting Co., 256-260 Devonshire st., Boston, M.
Boston Car Spring Co. 19 Pearl st., Boston, M.
Boston Woven Hose Co., 234 Devonshire st., Boston, M.
Bosworth, N. A., 253 Asylum st., Hartford, Conn.
Braman, Dow & Co., 3-6 Haymarket sq., Boston, M.
Brandt, Randolph, 38 Cortlandt st., N. Y.
Brown, R., Norwich, Conn.
Brundage, Edw. H., 118 Chambers st., N. Y
Buckley, John W., 156 South st., N. Y.
Campbell, Geo. & Co., Burkeville, Va.
Canfield Mfg. Co., 125 N. 7th st., Phila., Pa.
Campbell, Walsh & Jilson, 225 E. 4th st., St. Paul, Minn.
Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Chalmers-Spence Co., 419 8th st., N. Y., and 34 S. 2d st., Phila., Pa. **IV.**
Chesterton, A. W. & Co., 49 India st., Boston, M.
Chestnut, D. & Co., 147 1st av., Pitt'g., Pa.
Chicago Metallic Packing Co., 199 Lake st., Chicago, Ill.
Childs, H. L. & Co., 8 Smithfield st., Pitt'g., Pa.
Cleveland Rubber Co., C. & P. and Nickle Plate R. R., Cleveland, O.
Combination Roll & Rubber Co., 62 Astor House, N. Y.
Common Sense Metallic Packing Mfg. Co., 90 Walker st., N. Y.
Conant Rubber Co., 26-28 Asylum st., Hartford, Conn.
Cottrell, C., Newport, R. I.
Darrow, A. R., New London, Conn.
Davis, G., 9 E. 4th st., N. Y.
Davis, S. S., 438 Rodney st., Brooklyn, N. Y.
Deed's Metallic Packing Co., 179 Christopher st., N. Y., and Chicago, Ill.
De Long Car Box Packing Co., Concord & Madison avs., Allegheny, Pa.
Dockum, Edw. H., 33 John st., N. Y.
Donaldson, J. P. & Co., 22 Woodward av., Detroit, Mich.
Donegan & Swift, 174 Fulton st., N. Y.
Dudgeon, J. W., 92 1st av., Pitt'g., Pa.
Eastern Supply Co., 19 Pearl st., Boston, M.
Elastic Packing Mfg. Co., 18 B'way, N. Y.
Empire Rubber Co., Trenton, N. J.
Flocker John & Co., Allegheny, Pa.
Forest City Packing Co., 45 Dey st., N. Y., and 45 Water st., Cleveland, O.
Ford, John K., 408 Bleecker st., N. Y.
Foskett & Bishop, 462 State st., New Haven, Conn.
Fossil Meal Co., 48 Cedar st., N. Y.
French, R., Medfield, M.
Frothingham, J. K., 58 Centre st., N. Y.
Gage, D. T., 118 Market st., Phila., Pa.
George, E. & Co., 82 South st., N. Y.
Gerwig, H. & Sons, 1303 Penn av., Pitt'g., Pa.
Gilmour, R. M., 82 John st., N. Y.
Glanding, J. & Co., 115 Queen st., Phila., Pa.

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Globe Rubber Co., Trenton, N. J.
Goodyear's India Rubber Glove Mfg. Co., 503-505 B'way, N. Y.
Gould Steam & Water Packing Co.,36 Cambridge st., E. Cambridge, M.
Gutta Percha & Rubber Mfg. Co., 159 Lake st., Chicago, Ill. and c. Warren and Church sts., N. Y.
Hamilton Rubber Co., Trenton, N. J., and 131 Lake st., Chicago, Ill.
Henderson, Wm. G. & Co., 520 Wood st., Pitt'g., Pa.
Higgins, Francis T., 89 West st., N. Y.
Hine & Robertson, 45 Cortlandt st., N. Y. 82.
Holt, E., 106 3d av., Pitt'g., Pa.
Home Rubber Co., Trenton, N. J.
Hoole Mfg. Co., 46 Bond st., N. Y.
Indented Paper Co.,(The), 280 B'way, N. Y.
Jacobs, Chas. C., Cordage Co., (The), 65 Walnut st., Cincinnati, O.
James, C. E. & Co., 103 E. 8th st., Chattanooga, Tenn.
Jenkins Bros., 105 Milk st., Boston, M.; 71 John st., N. Y., and 13 S. 4th st., Phila., Pa.
Jerome Metallic Packing Co., 204 Dearborn st., Chicago, Ill.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.; 170 N. 4th st., Phila., Pa., and Chicago, Ill.
Katzenstein, L. & Co., 357 West st., N. Y.
Kay Bros. & Co., 121 Water st., Pitt'g., Pa.
Knapp, A. A. & Co., Union City, Ind.
Law, Jesse L., Jr., 110 John st., N. Y.
Leonard & McCoy, 118 Liberty st., N. Y.
Leroy, J., Pine Co., (The), 550-554 Fulton st., Troy, N. Y.
Lombært Mfg. Co., 236 N. Water st., Phila., Pa.
Loomis, Reuben B., 181 Pearl st., N. Y.
Lowell Felting Mills, Lowell, M.
Lunn, J., 500 Penna. av., Pitt'g., Pa.
Marston, I. G. & Co., 3 Appleton st., Boston, M.
Martin, R., 116 John st., N. Y.
Martin, T., 161 Sycamore st., Detroit, Mich.
Mercer Rubber Co., Trenton, N. J.
Miller Packing Co., 1338 Buttonwood st., Phila., Pa.
Morrison, R., New Manchester rd., St. Louis, Mo.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. V.
Ohio Belting & Supply Co., Cleveland, O.
Otley Mfg. Co., 95 Ashland blk., Chicago, Ill.
Otley & Watkins, 95 Ashland blk., Chicago, Ill.
Page, E. W., 62 Liberty st., N. Y.
Peatty & Perry, 38 Cortlandt st., N. Y.
Peerless Mfg. Co., 34 Murray st., N. Y.
Peteler, W. H., 73 New st., N. Y.
Phillips, J. & H., 26 6th st., Pitt'g., Pa.
Phœnix Packing & Rubber Co., 108 Liberty st., N. Y.
Pittsburg Supply Co., (Ltd.),105 Wood st., Pitt'g., Pa.
Putnam & Foley, 127 Milk st., Boston, M.
Read, Edward B., 61 1st st., San Francisco, Cal.
Revere Rubber Co., 64 Reade st., N. Y., and 63 Franklin st., Boston, M.
Risdon Iron & Locomotive Works, Beale and Howard sts., San Francisco, Cal.
Rowland & Hunzeker, Isabella st., nr. Sandusky, Allegheny, Pa.
Sharp, J., 59 Walnut st., Cincinnati, O.
Silver Lake Co., 82 Chauncey st., Boston, M.
Smith, James & Co., 137 Market st., Phila., Pa.
Star Rubber Co., Trenton, N. J.
Symonds & Co., 120 Exchange pl., Phila., Pa.
Trainer, Chas. W. & Co., 15 Oliver st., Boston, M.
Trenton Rubber Co., Trenton, N. J.
Town & Bro., 712 Market st., Phila., Pa.
Townsend, I., 203 N. 3d st., Phila., Pa.
Tupper, Frederick W., 39 Nassau st., N. Y.
United States Metallic Packing Co., 267 S. 4th st., Phila., Pa.
Vulcanized Fibre Co., Wilmington, Del., and 14 Dey st., N. Y. 96.
Walker, T., 4615 Tacony, W. Hall, Phila., Pa
Watt's, John M. Sons, 121 S. Water st., Phila., Pa.
Western Mineral Wool Co., Cleveland, O.
Wickersham Mfg. Co., 121 S. Water st., Phila., Pa.
Wilson-Snyder Mfg. Co., 51 S. Water st., Pitt'g., Pa.
Winans Packing, Mfg. Co., 408 Bleecker st., N.Y.
Wind, Chas. D. & Co., 113-115 Morgan st., St. Louis, Mo.
Wood, W., 231 Vine st., Phila., Pa.

Paddles—Boat.

Rushton, J. H., Canton, N. Y.

***Pads—Rubber.**

Greeley, E. E. & Co., 5 Dey st., N. Y.

Paint and Color Manufacturers.

Ables, C. T. & Co., Little Rock, Ark.
Acme White Lead & Color Works, 310 Grand River av., Detroit, Mich.
Adamanta Mfg. Co., 81 New st., N. Y., and 70 Kilby st., Boston, M.
Adams, E. & Co., Bennington, Vt.
Adler, S. & Sons, 197 Pearl st., N. Y.
Advance Paint Mfg. Co., Camden, N. J.
Alliance Paint Co., Alliance, O.
Alston Mfg. Co., 212 Randolph st., Chicago, Ill.
American Mixed Paint Co., 51 Barclay st., N. Y.
American Paint Co., 55 W. Canal st., Cincinnati, O.
American Pure Paint Co., 535 31st st., Chicago, Ill.
Anchor Color Mfg. Co., 464-466 Cherry st., N. Y.
Anglo-American Varnish & Color Co., 1076 N. Wood st., Chicago, Ill.
Ansbacher, A. B. & Co., 312 N. 7th st., B'kln., N. Y.; 43 John st., N. Y., and 139 Lake st., Chicago, Ill.
Apex Color Works, 46 Centre st., N. Y.
Armstrong, D. R. & Co., 107 Fulton st., Chicago, Ill.
Atlantic Color Works, 165 William st., N. Y.
Atlas Paint Co., 93 Main st., Allegheny, Pa.
Atlas Paint Works, 184 1st av., N. Y.
Averill & Sharp, Pulaski, N. Y.
Ayres, P. & Son., 424 Broome st., N. Y.
Baker, O. P., 508 Carroll av., Chicago, Ill.
Balbach, W., 13 Platt st., N. Y.
Baltimore Enamel Paint Co., 235 Smith's whf., Balt., Md.
Barnett, J. P., 178 Front st., N. Y., and 278 Passaic st., Newark, N. J.
Bass, Albert R. & Sons., 170 Front st., N. Y.
Bates, J. M., 20 Merwin st., Cleveland, O.
Bay State Paint Co., Rowley, M.
Baxter, W. M. & Co., 37 S. 3d st., Brooklyn, N. Y., and 178 Front st., N. Y.
Bean, L. U. & Co., 832 Cox st., Phila., Pa.
Belden & Co., Green Island, N. Y.
Billings, Taylor & Co., 16 Platt st., N. Y., and ft. Case av., Cleveland, O.
Binswanger, S. & Co., Richmond, Va.
Binswanger & Pollock, 343 N. 4th st., Phila., Pa.
Birmingham Paint Co., Birmingham, Ala.
Bochners, A. & Sons, 168 West Court st., Cin., O.
Boston Lead Mfg. Co., 162 Congress st., Boston, M.
Bouton, A. F., 258 W. 28th st., N. Y.
Bowen, S. & Sons, 150 N. 4th st., Phila., Pa.
Boydell Bros., 41 Fort. E., Detroit, Mich.
Bradford, J., Wilmington, Del.
Bradley & Vrooman, 247 S. Water st., Chicago, Ill.
Brandon, Kaolin & Paint Co., Brandon, Vt.
Brandon Mining Co., Brandon, Vt.
Breidbach, C. J. & Son, Mott av., c. 144th st., N. Y.
Bridgeport Wood Finishing Co., (The), New Milford, Conn.
Briggs, John & Co., 31 Batterymarch st., Boston, M.
Brooklyn Color Co., (The), 69 Wythe av., Brooklyn, N. Y.
Brown, L. Mfg. Co., 32 Liberty st., N. Y.
Browne, W. E. & Co., 26 Burling Slip, N. Y.
Brownell & Co., New Bedford, M.
Brudbach, C. J. & Son, 396 Mott av., N. Y.
Bryant Bros. & Co., Woburn, M.
Buckeye Paint & Varnish Co., Toledo, O.
Budd, J. J., 149 Bank st., N. Y.
Bush & Hollingsworth, 28 Dey st., N. Y.

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California Paint Co., 419 Jackson st., San Francisco, Cal.
Camden Color Co., Camden, N. J.
Canada Linseed Oil Co., Vandervort av., nr. Grand st., Brooklyn, N. Y.
Canton Paint & Oil Co., Melrose, M.
Carpenter, Woodward & Morton, 151 Milk st., Boston, M.
Cary, Ogden & Parker, 276 W. 18th st., Chicago, Ill.
Cedar Rapids Linseed Oil Paint Co., Cedar Rapids, Iowa.
Central Paint & Roofing Co., 4th st., c. Race, Cin., O.
Chicago Paint & Color Co., 105 Fulton st., Chicago, Ill.
Chicago White Lead & Oil Co., N. Green st., c. Fulton, Chicago, Ill.
Chicago Wood Finishing Co., 259 Elston av., Chicago, Ill.
Childs, C. M. & Co., 225 Pearl st., N. Y., and 41 Summit st., Brooklyn, N. Y.
Chilton Mfg. Co., 147 Fulton st., N. Y., and 141 Milk st., Boston, M.
Christian, T., Richmond, Va.
Cincinnati Standard Asbestos Paint Co., (The), 35 Water st., Cincinnati, O.
Clements, A. L., 96 W. 2d st., Cincinnati, O.
Cleveland Iron Ore Paint Co., 154 Merwin st., Cleveland, O.
Clinton Metallic Paint Co., Clinton, N. Y.
Coffin, Devoe & Co., 176 Randolph, st., Chicago, Ill.
Colt & Co., 206 Kinzie st., Chicago, Ill.
Columbus Paint Mfg. & Roofing Co., Columbus, O.
Commercial Paint Works, Newburgh, N. Y.
Connor, Chas. H., Clay st., c. Franklin, Louisville, Ky.
Connors, Wm., 171 Hill st., Troy, N. Y.
Cottage Color Paint Co., Springfield, O.
Crown Paint Iron Co., Brandon, Vt.
Cutter, W. E. & Co., Worcester, M.
Davidson & Knowles Co., 51 Barclay st., N. Y.
Defiance Paint Works, Cincinnati, O.
Deloach, A. L., Memphis, Tenn.
Detroit Ideal Paint Co., 106 W. Congress st., Detroit, Mich.
Detroit Lead and Color Mfg. Co., 135 Bates st., Detroit, Mich.
Detroit White Lead Mfg. Co., 107 Jones st., Detroit, Mich.
Devor, F. W. & Co., 103 Fulton st., N. Y.
Dighton Color Works, 125 S. 3d st., Phila., Pa.; Dighton, M., and 36 Cedar st., N. Y.
Doggett Bros., 138-140 Maiden Lane, N. Y.
Dolphin Paint Works, Toledo, O.
Donald, C. W. & Co., 138 Congress st., Boston, M.
Dry Kalsomine and Fresco Paint Works, 25-27 John st., Brooklyn, N. Y.
Dubuque Linseed Oil Paint Co., Dubuque, Iowa.
Dunbar, Wallace, Platt st., c. Pearl, N. Y.
Dunham, T. C., 68 Murray st., N. Y.
Eagle Paint and Varnish Works, 191 Main st., Allegheny, Pa.
Eagle White Lead Co., 20 Spring st., Cincinnati, O.
Eakins, J. S., 99 Maiden Lane, N. Y.
Earle, E. P., 71 Maiden Lane, N. Y.
Earle & Co., 206 Greene st., N. Y.
Eckstein White Lead Co., S. W. c. 7th and Freeman av., Cincinnati, O.
Ehringer, H. M. & Co., 33 W. 3d st., N. Y.
Ely, O. A., Lorne, Conn.
Elliott & Loomis, Williamsport, Pa.
Erdtmann, W. & H., 61 Cedar st., N. Y.
Erwin, H., Bethlehem, Pa.
Essex Paint Works, Essex, Conn.
Excelsior Enamel Paint Co., 51 Barclay st., N. Y.
Fahnenstock, B. L., Mfrs. Supply Co. 87 4th av., Pitt'g., Pa.
Fassett, H. S. & Co., 102 Euclid av., Cleveland, O.
Feigel, M. & Bro., 147 Mercer st., N. Y.
Felton, Rau & Sibley, 136 N. 4th st., Phila., Pa.
Fernolime Chemical Co., 18 Broadway, N. Y.
Ferronite Mfg. Co., 32 Liberty st., N. Y.
Fire Proof Paint Co., Aurora, Ill.
Flinn, J. & C., 127 N. 3d st., Phila., Pa.
Folsom, C. E. & Co., 16 Hamilton st., c. Franklin, Boston, M.
Foos, J., Springfield, O.
Fox, M. E., 167th st., nr. Railroad av., N. Y.
French, S. H. & Co., York av., Phila., Pa.
Fuller & Fuller, 220-222 Randolph st., Chicago, Ill.
Gabriel & Schall, 205 Pearl st., N. Y.
Ganser, J. & Co., 1708 S. Broadway, St. Louis, Mo.
Garden City Oil Co., 25 N. May st., Chicago, Ill.
Gardiner, Geo. N., 53 South st., N. Y.
Gardom, G., 19 S. 7th st., Phila., Pa.
Garry Iron Roofing Co., 152 Merwin st., Cleveland, O.
Gatch, E. W., Norfolk, Va.
Gate City Paint Co., Kansas City, Mo.
Gifling, J. C. & Son., 23 South st., N. Y.
Gilman, C. H., 18 Decatur st., East Boston, M.
Girard Paint and Oil Co., 123 Arch st., Phila., Pa.
Glahn, H. G. & Co., 1411 Vine st., Phila., Pa.
Godfrey, R. B., Burglington, Vt.
Goodwin, S. J., Beloit, Wis.
Gunst, A & Son, Richmond, Va.
Gutta Percha Paint Co., 218 La Salle st., Chicago, Ill., and 46 S. Water st., Cleveland, O.
Haddenfield Paint & Oil Co., 124 Market st., Phila., Pa.
Hammar, F. Paint Co., 179 E. Pearl st., Cincinnati, O.
Hammill, Gillespie, 240 Front st., N. Y.
Hammond's Paint & Slug Shot Works, Fishkill on Hudson, N. Y.
Hampden Paint & Chemical Co., Springfield, M.
Harrison Bros. & Co., Gray's Ferry road, c. S. 56th st., Phila., Pa., and 117 Fulton st., N. Y.
Heath & Milligan Mfg. Co, 170 Randolph st., Chicago, Ill.
Heller & Merz, 55 Maiden Lane, N. Y.
Hempstead, S. W. & Co., Columbus, O.
Henderson, R. & Co., Fort Howard, Wis.
Hess, H. K., Bellaire, O.
Hygienic Kalsomine Co., 199 Market st., Chicago, Ill.
Hinds, N. E., Milwaukee, Wis.
Hirshberg, Hollander & Co., 106-110 W. Pratt st., Balt., Md.
Hoffman & Kiessig, 79 Maiden Lane, N. Y.
Hoffstaetter, C. W., ft. E. 119th st., N. Y.
Holliday's, R., Sons, 45 Roebling st., Brooklyn, N. Y.
Hooker, H. M., 57 W. Randolph st., Chicago, Ill.
Hopkins, C. F. & Co., Depot, nr. 8th st., Cincinnati, O.
Hore, E., 62 N. 11th st., Brooklyn, N. Y.
Howell, C. H. & Co., 99 Maiden Lane, N. Y., and 212 Race st., Phila., Pa.
Howey, D. G., Toledo, O.
Hutchinson Paint Co., 33 W. Washn. st., Chicago, Ill.
Ilsley, Doubleday & Co., 159 Front st., N. Y.
Ingersoll Paint Works, 64 Fulton st., N. Y.
Iron City Paint Works, Duquesne and Water sts., Pitt'g., Pa.
Iron Clad Paint Co., 3 Case Building, Cleveland, O
Jacobs, S., 449 West st., N. Y.
Jillard, E. E., 1645 N. 10th st., Phila., Pa.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.; 170 N. 4th st., Phila., Pa., and 175 Randolph st., Chicago, Ill.
Johnson, G. H., 404 Arch st., Phila., Pa.
Johnston, H. M., 25 John st., Brooklyn, N. Y.
Johnston Mfg. Co., 277 S. Canal st., Phila., Pa.
Johnson, O. & Co., 13 Exchange st., Providence, R. I.
Jones & Co., 35 Portland st., Boston, M.
Kalle & Co., 172 Pearl st., N. Y.
Keppelman, A., 168 Fulton st., N. Y.
Knaggs, T. P., 211 Freeman av., Cincinnati, O.
Knowlson, Thomas, West Troy, N. Y.
Kohnstamm, H. & Co., 126 Chambers st., N. Y.
Kolbe, J., 191 W. 5th st., Cincinnati, O.
La Bar Mineral Paint Co., 239 S. 6th st., Phila., Pa.
Lawrence, W. W. & Co., 130 Ridge av., Allegheny, Pa.
Lexington Paint Co., 126 State st., Boston, M.
Lindemam, Wm. T. & Co., 1400 Frankford av., Phila., Pa.

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Liquid Glass Paint Co., 147 Commerce st., Hartford, Conn.
Little Rock Paint Works, Little Rock, Ark.
London White Lead Co., 26-28 Potter st., Hartford, Conn.
London White Lead Color Co., (S. G.) Glastonbury, Conn.
Long, E. & Co., 191 Clinton st., Cincinnati, O.
Long Island Paint & Color Works, 26 Broadway, N. Y.
Longman & Martinez, 207 Pearl st., N. Y.
Lowe Bros., Dayton, O.
Lowes Metallic Paint Co., Chattanooga, Tenn.
Lucas, J. & Co., Gillsboro, N. J.
Lucas, John & Co., 141 N. 4th st., Phila., Pa., and 89 Malden Lane, N. Y.
Lucas, Wm. E., 89 Malden Lane, N. Y.
Lutz & Movius, 15 Warren st., N. Y.
Lyon, H. A., Bennington, Vt.
McCreary, J. A. & Co., 23 S. Charles st., Balt., Md.
McDonagh, W. & Co., 180 Front st., N. Y.
McGee & Murphy, Waukesha, Wis.
McKenzie & Thompson, Gadsden, Ala.
Macher, W., 16th st., c. Clearfield, Phila., Pa.
Maecker, E., 127 Scholes st., Brooklyn, N. Y.
Malone, A. J., 1402 N. 10th st., Phila., Pa.
Manderfield & Payne, Mankato, Minn.
Marshall Paint Works, Marshalltown, Iowa.
Masury, John W. & Son, 93 Nassua st., N. Y.; 55 Pearl st., Brooklyn, N. Y., and 190 Mich. av., Chicago, Ill.
Matteson Bros. & Co., N. Branch c. Bliss st., Chicago, Ill.
Matteson, J. A. & Co., Cape Girardeau, Mo.
Mehpam, G. S. & Bros., 24 N. Main st., St. Louis, Mo.
Merriman, J. N., Canal st., c. Kinzee, Chicago, Ill.
Miller, C. G. & Co., 591 W. 5th st., Cincinnati, O.
Miller Bros., 29 St. Clair st., Cleveland, O.
Minneapolis Linseed Oil Co., Minneapolis, Minn.
Mississippi Valley Paint Co., 211 S. 3d st., St. Louis, Mo.
Moore, B. & Co., Water st., c. Adams, Brooklyn, N. Y.
Morrison, Hanna & Allen Co., 204 S. Clinton st., Chicago, Ill.
Morse, Hill & Co., 1022 Lorain st., Cleveland, O.
Moser, Chas. & Co., 61 Main st., Cincinnati., O.
Mound City Paint & Color Co., 509 N. 2d st., St. Louis, Mo.
Moury, A. J. & Son, Milan, O.
Murphy, C. J. & Co., 332 N. Calvert st., Balt., Md.
Nalad Oil & Blacking Co., 197 Market st., Chicago, Ill.
National Mixed Paint Co., 218 Lasalle st., Chicago, Ill.
Nelson, A. M. Paint Co., 621 N. Main st., St. Louis, Mo.
Nevin, T. H. & Co., Grant st., c. Western av., Allegheny, Pa.
New York Color and Chemical Works, (The), 210-214 11th av., N. Y.
New York Enamel Paint Co., 178 Prince st., N. Y.
New York Fire Proof Paint Co., 65 Malden Lane, N. Y.
Nickel Smelting & Peroxidi Color Co., 84 William st., N. Y.
North River Paint Co., 176 Broadway, N. Y.
Northwestern Paint Works, St. Paul, Minn.
Paas Dye Co., 765 Broad st., Newark, N. J.
Pacific Oil & Lead Works, 202 California st., San Francisco, Cal.
Pacific Rubber Paint Co., 228 Beale st., San Francisco, Cal.
Palmer, F. H., 69 Gold st., N. Y.
Palmer & Duff, Greenwich, Conn.
Parker & Co., 63 S. Main st., Providence, R. I.
Paraffine Paint Co., 280 S. Water st., Chicago, Ill.
Paragon Asbestos Paint Co., (The), 35 W. Canal st., Cincinnati, O.
Patton, J. E. & Co., Milwaukee, Wis.
Paul, J., La Crosse, Wis.
Peart Bros., Corning, N. Y.
Peninsular White Lead & Color Works, Detroit, Mich.
Penn. Oil Mfg. Co., 216 Dock st., Phila., Pa.
Pennsylvania Paint Co., Erie, Pa.
Pfeiffer & Lavanberg, N. 11th st., nr. Driggs, Brooklyn, N. Y.
Phœnix Paint Co., 36 Michigan st., Cleveland, O.
Pickhardt, W. & Kuttroff, 98 Liberty st., N. Y.
Pierce, F. O. & Co., 170 Fulton st., N. Y., and 30 Tiffany pl., Brooklyn, N. Y.
Pilkington, H. S., N. 17th st., c. Indiana, Phila., Pa.
Pitkin, G. W. & Co., 279 S. Clinton st., Chicago, Ill.
Pittsburg Iron Paint Co., 137 S. Canal st., Allegheny, Pa.
Popplein, G. & N., Jr., Hanover st., c. Lombard, Balt., Md.
Pratt, L. P., Emlen st., c. E. Thompson, Phila., Pa.
Price, W. B. Mfg. Co., 347 Warren av., Balt., Md.
Prince Mfg. Co., (The), 71 Maiden Lane, N. Y.; 20 B'way., Cincinnati, O., and Prince, Pa.
Pring, F. C. & Co., 195 Lasalle st., Chicago, Ill.
Puritan Color Co., Bethlehem, Pa.
Quarterman, E. A., 159 South st., N. Y.
Raynolds, C. P. & Co., 106 Fulton st., N. Y., and 21 Lake st., Chicago., Ill.
Reading Paint Works, Reading, Pa.
Readville Color Works, Hyde Park, M.
Rhoads, P. & Co., Columbus, O.
Richardson, B., Norfolk, Va.
Rodenbaugh, J. S. & Co., Easton, Pa.
Roessler & Hasslacher, Perth Amboy, N. J.
Rooney, J., 101 Water st., N. Y.
Rose Bros., Coal Run, O.
Rossell, J. J., Dayton, O.
Rubber Paint Co., 750 Wash'n. st., N. Y.; 211 S. 3d st., St. Louis, Mo., and 197 Market st., Phila., Pa.
Russell Fire Proof Paint Co., 162 E. Wash'n. st., Chicago, Ill.
Ruth, B. F. & Co., Prince, Pa.
Rutherford & Barclay, 305 Chestnut st., Phila., Pa.
St. Louis Lead & Oil Co., 151 Milk st., Boston, M.
St. Louis Paint Mfg. Co., 1301-1313 Papin st., St. Louis, Mo.
Sadler, D. M. & Co., 14 E. Lexington st., Balt., Md.
Sagendorph Roofing & Paint Co., (The), 14 E. 2d st., Cincinnati, O.
Salem Lead Works, 21 Pearl st., Boston, M.
Saltzman, J. L., 241 Huron st., Brooklyn, N. Y.
Sanitary Fresco Co., 197 Market st., Chicago, Ill.
Sargent Paint Co., 728 N. Main st., St. Louis, Mo.
Schiesle, H., 218 Chicago av., Chicago, Ill.
Schiffiin, Phillip, 212 Pearl st., N. Y.
Schuchmann, A., 80 Columbia st., N. Y.
Schwarze, C., 66 Boerum st., Brooklyn, N. Y.
Seaman, R. F. & Co., 38 Burling Slip, N. Y., and 132 Bay st., Jersey City., N. J.
Seeley Bros., 32 Burling Slip, N. Y., and 247 Water st., Brooklyn, N. Y.
Senour Mfg. Co., 2520 Quarry st., Chicago, Ill.
Sherwin-Williams Co., (The), 178 Fulton st., N. Y.; 241 Jackson st., Chicago, Ill., and 100 Canal st., Cleveland, O.
Shoe, B. & Co., 1303 Beach st., Phila., Pa.
Sioux City Paint & Oil Co., Sioux City, Iowa.
Sly, W. W., Minneapolis, Minn.
Smith, B., Milladore, Wis.
Smith, Edward & Co., 158 William st., N.
Smith, J., Lee & Co., 86 Beekman st., N. Y.
Smith & Stearns, Davenport, Iowa.
Snyder, A. & Son, Krumroy, O.
Sondheim, Alsberg & Co., 54 Maiden Lane, N. Y.
Southern Paint & Color Co., Chattanooga, Tenn.
Staab, C. P. & Co., 108-110 Duane st., N. Y.
Standard Paint Co., 127 Scranton av., Cleveland, O.; 59 Maiden Lane, N. Y., and 280 S. Water st., Chicago, Ill.
Standard Rouge & Crocus Co., N. 22d nr. Allegheny av., Phila., Pa.
Starck, C. B., 191 Vail av., Troy, N. Y.
Starkey, O. L. & Co., Fort Wayne, Ind.
Stephens Paint Specialty Co., ft. Delancey st., N. Y.
Sterling Paint & Color Works, 591 W. 5th st., Cincinnati, O.
Stevens Paint Specialty Co., 31 33 S. 5th st., Brooklyn, N. Y.
Stevenson, R. & Co., 92 Lake st., Chicago, Ill.

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Strickler Bros. & Perry, (butter color) Sterling, Ill.
Superior Iron Paint Co., (The), Appleton, Wis.
Suydam, M. B. & Co.,474 Rebecca st., Allegheny, Pa.
Swift, Wm. H. & Co., 117 Milk st., Boston, M.
Swissler, William, 207-209 W. Randolph st., Chicago, Ill.
Tarr, J. H., Gloucester, M.
Tarr & Wonson, Gloucester, M.
Tassett, H. S. & Co., 102 Euclid av., Cleveland, O.
Thompson Mfg. Co., Lake Shore nr. Waverly st., Cleveland, O.
Thurston, F. W. & Co., 29 River st., Chicago, Ill.
Tiemann, D. F. & Co., 16 Murray st., N. Y.
Toch, J. L. & J., 52 Stone st., N. Y.
Toledo Paint & Supply Co., Toledo, O.
Townsend Paint Co., 281 Pearl st., N. Y.
Trainer, C. W. & Co., 148 Oliver st., Boston, M.
Tremont Gold & Mineral Paint Co., Haverhill, M.
Troy Paint & Color Works, 171 Hill st., Troy, N. Y.
Truscott, S. & Sons, 36 Michigan st., Cleveland, O.
Ullman & Philpott Mfg.Co.,(The), 56 Merwin st., Cleveland, O.
Union Paint Co., 91 Mechanic st., Newark, N. Y.
U. S. Gutta Percha Paint Co.,131 Mathewson av., Providence, R. I.
Universal Color Co., 88-92 5th av., N. Y.
Valentine & Co., 245 B'way, N. Y.
Vane-Calvert Paint Co., 201 Randolph st., Chicago, Ill., and 615 N. Main st., St. Louis, Mo.
Van Pelt Bros., Des Moines, Iowa.
Vanschack, P. & Sons, 138 Lake st., Chicago, Ill.
Vilas Bros., 227 229 5th av., Chicago, Ill.
Vogel, Chas. Paint & Glass Co., 112 S. 4th st., St. Louis, Mo.
Voigt, E. & Co., 323 N. Main st., St. Louis, Mo.
Waddell, R. J. & Co., 52 Beekman st., N. Y.
Wadsworth, D. & Son, 240 Pearl st., N. Y.
Wadsworth, Howland & Co., 263-265 Wabash av., Chicago, Ill., and 82 Wash'n. st., Boston, M.
Walker Paint Co., (The), 152-154 Court st., Cincinnati, O.
Walkers, J. W. Bros. & Co., 152 W. Court st., Cincinnati, O.
Walz, J. & Co., York, Pa.
Warren Paint Co., (The), Warren, O.
Weddle, Wm. B., 83 Maiden Lane, N. Y.
Westbrook & Wells, Ogdensburg, N. Y.
Western Paint & Roofing Co., (The), 25 Main st., Cincinnati, O.
Wetherill & Bros., 31st and Chestnut sts., Phila., Pa.
Wetherill, S. P. & Co., (Ltd.), 112 John st., N. Y., and 47 N. Front st., Phila., Pa.
Whitney, L. L., Millbury, M.
Whittier, Fuller & Co., Front st., c. Pine, San Francisco, Cal.
Wilkinson, Thomas & Co., Burlington, Iowa.
Williams, S., 181 South st., N. Y.
Wills, W. H., 165 Furman st., Brooklyn, N. Y.
Winters Metallic Paint Co., Milwaukee, Wis.
Wolff & Randolph, 703 B'way, N. Y.
Wood's, Henry, Son & Co., 34 Oliver st., Boston, M.
Woolsey, C. A., 190 Hudson st., Jersey City, N. J.
Yarnall, H. E. & D. G., 1027 Filbert st., Phila., Pa.
Zentgraf, C. F., 71 Duane st., N. Y.

Paint—Asphalt.

Louisville Asphalt Varnish Co., Louisville, Ky.
National Paint Works, Williamsport, Pa.

Paints—Bridge.

Acme White Lead & Color Works, Detroit, Mich.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.
Lucas, John Co , 89 Maiden Lane, N. Y.
Troy Paint & Color Works, Troy, N. Y.

Paints—Bronze.

Cook, Chas. & Co., 5 Dey st., N. Y.
Linderman, Wm. T. & Co., 1400-1402 Frankford av., Phila., Pa.

Paints—Car.

Brill, J. G. & Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Chicago Wood Finishing Co.,143-145 S. Clinton st., Chicago, Ill.
Coffin, Devoe & Co., 176 Randolph st., Chicago, Ill.
Iron Clad Paint Co., 3 Case Bldg., Cleveland, O.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lowes Metallic Paint Co., Chattanooga, Tenn.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Peabody, H. W. & Co., Mason Bldg., Boston, M.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Sherwin, Wm.Co.,(The), 100 Canal st., Cleveland, O.
Valentine & Co., 245 B'way, N. Y.

Paint—Cement.

Cary, Ogden & Parker, Chicago, Ill.

Paints—Copper.

Gardiner, G. N., 53 South st., N. Y.
Tarr, James H., East Gloucester, M.

Paints—Enamel.

Excelsior Enamel Paint Co., 51 Barclay st., N.Y.
N. Y. Enamel Paint Co., 178 Prince st., N. Y.

Paints—Fire Proof.

Fletcher, F. A. & Co., 38-40 Huron st., Chicago, Ill.
Johns, H. W. Mfg. Co.,175 Randolph st., Chicago, Ill.; 170 N. 4th st., Phila., Pa., and 87 Maiden Lane, N. Y.
Johnston, D. Mfg. Co., 77 S. Canal st., Chicago, Ill.
Miller, C. & Co.,Grand Rapids, Mich.
New York Fire Proof Paint Co.,65 Maiden Lane, N. Y.
Peninsular White Lead & Color Works, Detroit, Mich.
Russell Fire Proof Paint Co., (The), Chicago, Ill.
Standard Paint Co., 59 Maiden Lane, N. Y.

Paints—Mineral.

Atlas Paint Co., Pitt'g., Pa.
Boss, A. R. & Co., Siegfried's Bridge, Pa.
Bostwick, White & Thomas, Ithaca, N. Y.
Brewster, F. T., Baraboo, Wis.
Chilton Mfg. Co., 147 Fulton st., N. Y., and 141 Milk st., Boston, M.
Cleveland Iron Ore Paint Co., 154 Merwin st., Cleveland, O.
Clinton Metallic Paint Co., 42 N. 4th st., Phila., Pa.
Fassett, H. S. & Co., 102 Euclid av.,Cleveland,O.
Garry Iron Roofing Co., 158 Merwin st., Cleveland, O.
Iron Clad Paint Co., Cleveland, O.
Johns, H. W., Mfg. Co., 87 Maiden Lane, N. Y.; 170 N. 4th st., Phila., Pa., and 175 Randolph st., Chicago, Ill.
Lowis Metallic Paint Co., Chattanooga, Tenn.
McBride, Chas. E., 197 Pearl st., N. Y.
Mepham, M. S. & Bro., 1301 Papin st., St. Louis, Mo.
Missouri Iron Roofing and Corrugating Co., 1501 S. 2d st., St. Louis, Mo.
N. Y. Iron Roofing and Corrugating Co., 115 Broadway, N. Y.
Nubian Iron Enamel Co., (The), 252 W. Jackson st., Chicago, Ill.
Peninsula White Lead and Color Works, Detroit, Mich.
Prince Mfg. Co., 71 Maiden Lane, N. Y.
Rutherford & Barclay, 305 Chestnut st., Phila., Pa.

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St. Louis Paint Co., 1301 Papin st., St. Louis, Mo.
Waynesburg Mineral Paint Works, Waynesburg, Pa.
Winter Metallic Paint Co., Milwaukee, Wis.

Paints—Mixed.

Austin, W. G., Kalamazoo, Mich.
Chilton Mfg. Co., 48 Maiden Lane, N. Y.
Devoe, F. W. & Co., 101 Fulton st., N. Y.
Garry Iron Roofing Co., 158 Merwin st., Cleveland, O.
Harrison Bros. & Co., 117 Fulton st., N. Y.
Lucas, J. & Co., 89 Maiden Lane, N. Y
Nevin, T. H. & Co., Allegheny, Pa.
New Jersey Enamel Paint Works, Raritan, N. J.
Peninsular White Lead & Color Works, Detroit, Mich.
Raynolds, C. T. & Co., 106 Fulton st., N. Y.
Semple, F. G., Bethlehem, Pa.
Troy Paint & Color Works, Troy, N. Y.
Vogel, Chas. & Co., 715 N. Main st., St. Louis, Mo.

Paints—Preserving.

Standard Paint Co., (The), 59 Maiden Lane, N. Y.

Paints and Colors—Railroad.

Ansbacher, A. B. & Co., 43 John st., N. Y.
Armstrong & McKelvey, 115 Wood st., St. Louis, Mo.
Billings, Taylor & Co., 16 Platt st., N. Y.
Blackwell Paint Co., (Ltd.), Muney, Pa.
Bradley & Vrooman, 2475 Water st., Chicago, Ill.
Cary, Ogden & Parker, Chicago, Ill.
Chilton Mfg. Co., 147 Fulton st., N. Y., and 141 Mich. st., Boston, M.
Coffin, Devoe & Co., 176 Randolph st., Chicago, Ill.
Connors, Wm., 171 Hill st., Troy, N. Y.
Coulston, J. W. & Co., 39 N. Front st., Phila., Pa.
Defiance Paint Works, Cincinnati, O.
Devoe & Co., F. W., Fulton and William sts., N. Y.
Felton, Rau & Sibley, 136 N. 4th st., Phila., Pa.
French, Samuel H. & Co., 4th and Callowhill sts., Phila., Pa.
Government Waterproof Paint Co., 52 Fulton st., N. Y.
Hammar, F. Paint Co., Cincinnati, O., and St. Louis, Mo.
Iron Clad Paint Co., Cleveland, O.
Johns, H. W. Mfg. Co., 87 Maiden Lane, N. Y.; Chicago, Ill., and Phila., Pa.
Lewis, John T. & Co., Phila., Pa.
Marsden-Andress Co., (The), 413 Walnut st., Phila., Pa.
Masury, J. W. & Son, 92 Nassau st., N. Y., and 190 Mich. av., Chicago, Ill.
Peninsular White Lead & Color Works, Detroit, Mich.
Railway Supply & Lantern Co., Phœnix Bldg., Chicago, Ill.
Reynolds & Co., C. T., 106 Fulton st., N. Y.
Sherwin-Williams Co., 178 Fulton st., N. Y.; 100 Canal st., Cleveland, O., and Chicago, Ill.
Smith & Co., Edward, 158 William st., N. Y.
Standard Paint Co., (The), 59 Maiden Lane, N. Y.
Troy Paint & Color Works, Troy, N. Y.

Paints—Roofing.

Canton Iron Roofing Co., Canton, O.
Conner, Charles H., Clay st., c. Franklin, Louisville, Ky.
Eagle Roofing Co., 141 Water st., Pitt'g., Pa.
Rutherford & Barclay, 305 Chestnut st., Phila., Pa.
Western Paint & Roofing Co., (The), 25 Main st., Cincinnati, O.
Wyman, Watson H., 6 Public Landing, Cincinnati, O.

Paint—Smoke Stack.

Dixon, Jos., Crucible Co., Jersey City, N. J.
Morrison Mfg. Co., 24 Park pl., N. Y.

Paints—Steamship.

Coffin, Devoe & Co., 176 Randolph st., Chicago, Ill.
Devoe & Co., F. W., c. William and Fulton sts., N. Y.
Peninsular White Lead and Color Works, Detroit, Mich.

Paints—Transparent.

Wolff & Randolph, 933-935 N. Front st., Phila., Pa.

Paints—Waterproof.

Greenwood & Martin, Beloit, Wis.
Peninsular White Lead and Color Works, Detroit, Mich.

Paint Removers.

Bell & Henry, Platteville, Wis.
Bootman, Rob't W., 31 Corlears st., N. Y.
Clark, David, 256 South st., N. Y.
Gelien, Henry, 155 Maiden Lane, N. Y.
Gleasing & Plush, 192 South st., N. Y.
Hall, Joseph I., 89 Pike st., N. Y.
Jordan, Gustave, 87 Thompkins st., N. Y.
Williams, Samuel, 181 South st., N. Y.

Pails, Tubs and Basins.

Union Indurated Fibre Co., 37 Barclay st., N. Y., and 39 Wabash av., Chicago, Ill.

Panels—Street Car.

Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Frost & Peterson, 161 W. 18th st., N. Y.
Kuhlman Car Co., 490 St. Clair st., Cleveland, O.
Laclede Car Co., 4500 N. Second st., St. Louis, Mo.
Pugh & Russell, Stewart Bldg., N. Y.
Stephenson, John & Co., (Ltd.), 47 E. 27th st., N. Y.

(Safety) Paper for R. R. Tickets.

Smith, Augustine & Co., 112 Nassau st., N. Y.

Paper—Toilet.

Albany Perforated Wrapping Paper Co., Colonie st., c. Montgomery, Albany, N. Y.
Barnard, H. & Co., 231 Pearl st., N. Y.
Robertson Bros., Hinsdale, N. H.
Scott Paper Co., (Ltd.), 27 N. 6th st., Phila., Pa.

Paris Green Manufacturers.

Peninsular White Lead and Color Works, Detroit, Mich.

Patents—Solicitor of.

Gooch, Chas. J., St. Cloud Bldg., Washington, D. C. 71.
Howson & Howson, 915 F st., Washington, D. C.
Lancaster, James H., 187 B'way, N. Y. 4.
Stocking, E. B., 611 F st., Washington, D. C.
Whittesey & Wright, Pacific Bldg., Washington, D. C.

Patents—Cable Railway.

Cable R'y Co., (The), 329 Market st., San Francisco, Cal.
Overhead Conductor Electric R'y Co., (The), Pitt'g., Pa.
Ries Electric R'y Traction Increasing System, (The), 27 Chamber of Commerce Bldg., Balt., Md.
Simpson Bros., 159 La Salle st., (room 15), Chicago, Ill.

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Warren-Scharf Asphalt Paving Co., 114 John st., N. Y.

Pavement—Cement.

Taylor & Son, Matt., 15 State st., N. Y.

***Paving Blocks—Wood.**

Chatterton, J. B., E. end Plymouth av. Bridge, Minneapolis, Minn. **54.**

Pedestals.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Baltimore Car Wheel Co., Balt., Md.
Bemis Car Box Co., Springfield, M.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 Broadway, St. Louis, Mo.
Dederick, Z. P., Sherman, Texas.
Foote, Orlo B., Cleveland, O.
Fulton Foundry, Cleveland, O.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co., (The), 27-35 Walworth st., Brooklyn, N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Snead & Bibb, Louisville, Ky.
Stephenson, John Co., (Ltd.), 47 E. 27th st., N. Y.
Street Railway Supply Co., Cleveland, O.
Wm. Wharton, Jr., & Co., Inc., 25th st., and Washington av., Phila., Pa.
Whitney, A. & Sons., Phila., Pa.

Phosphor Bronze.

Atwood & McCaffrey, 60 3d av., Pitt'g., Pa.
Tubal Smelting Works, 760 S. Broad st., Phila., Pa.

Phosphor Tin.

Naumann, Fred., 479 Broome st., N. Y.

Photo-Engravers and Designers.

Albertype Co., (The), 58-60 Reade st., N. Y. **93.**
Alexander, J. B., 1930 Carson st., Pitt'g., Pa.
Am. Photo Engraving Co., 15 Vandewater st., N. Y., and 591 Broadway, N. Y.
Bartholomew, C. E., 22 College pl., N. Y.
Bell Bros, 466 C st., Washington, D. C.
Blomgren Bros. & Co., 162 S. Clark st., Chicago, Ill.
Boston Engraving Co., 227 Tremont st., Boston, M.
Boston Photo-Gravure Co., 27 Boylston st., Boston, M.
Bragdon, John C., 78 4th av., Pitt'g., Pa.
Central Bureau of Engraving, 30 Vesey st., N. Y.
Chicago Photo-Gravure Co., 296 Dearborn st., Chicago, Ill.,
Cooper, W. A. Photo-Mechanical Co., 89 Randolph st., Chicago, Ill.
Crosscup & West Engraving Co., (The), 907 Filbert st., Phila., Pa. **59.**
Dieterich, F. G., 802 F st., Washington, D. C.
Electro-Engraving Co., 66 Reade st., N. Y.
Electro-Light Engraving Co., 157-159 William st., N. Y.
Forbes Lithograph Mfg. Co., 181 Devonshire st., Boston, M.
Franklin Photo Electrotype Co., 305 Pearl st., N. Y.
Frey Printing Co., (The), 11-13 E. 8th st., Cin., O.
Gill, E. M., 34-36 N. Moore st., N. Y.
Heliotype Printing Co., 211 Tremont st., Boston, M.
Jones, Harry C., 35-37 Frankfort st., N. Y.
Levytype Co., 7th st., c. Chestnut, Phila., Pa.
Lewis Company, 27 Boylston st., Boston, M.
Mercantile Photograph & Photo Eng. Co., 218 Fulton st., N. Y. **50.**
Moss Engraving Co., 535 Pearl st., N. Y. **62.**
N. Y. Photo Etching Co., 63 Duane st., N. Y.
N. Y. Photo & General Lithographic Est'ment, 178 William st., N. Y.
Nicoll, Chas. A., S. W. c. Washington and Meridian sts., Indianapolis, Ind.
Peters, N., 458 Penna. av., Washington, D. C.
Photo-Electrotype Co., 63 Oliver st., Boston, M.
Photo-Electrotype Engraving Co., 20 Cliff st., N. Y.
Photo-Engraving Co., 71 Park pl., N. Y., and 728 Chestnut st., Phila., Pa.
Photo-Etching Co., 299 Wash'n. st., Boston, M.
Photo-Gravure Co., 853 Broadway, N. Y.
Pennsylvania Engraving Co., 118 S. 7th st., Phila., Pa.
Raabe & Hackell, 86 Mason st., Milwaukee, Wis.
Rawsthorne Bros., 94 5th av., Pitt'g., Pa.
Ryder & Dearth, 91 Westminster st., Providence, R. I.
Smith, W. S., 6 College pl., N. Y.
Smith Bros., 119 S. 4th st., Phila., Pa.
Steinhaus, William, 80 Nassau st., N. Y.
Schwarz, R., 14 Ann st., N. Y.
U. S. Engraving Works, 22 College pl., N. Y.
Vandercook & Co., State and Madison sts., Chicago, Ill.
Van Leyen & Co., 149 Jefferson av., Detroit, Mich. **66.**
Vogeler Bros., 151 Wash'n. st., Chicago, Ill.
Wilson, A. S. & Co., 3 E. 4th st., N. Y.
Zeese, A. & Co., 119 Monroe st., Chicago, Ill.

Picks—Pick Axes.

Baird, Robertson, Pittston, Pa.
Baker, Hermann & Co., 101-103 Duane st., N. Y.
Briggs Iron & Tool Co., Findlay, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Collins & Co., 212 Water st., N. Y.
Crandall, Jas. W., Cortlandt st., N. Y.
Douglas Axe Mfg. Co., East Douglass, M.
Harrisburg Handle Co., Harrisburg, Pa.
McBain, Thos. A., 640 W. 38th st., N. Y.
Mead's, I. V. Tool Works, 370 av. A, N. Y.
Peck, A. G. & Co., Cohoes, N. Y.
Werd & Becker Mfg. Co., (The), 11 Gold st., N. Y.

Piers—Iron.

Cartter, M. S. & Co., B'way and Locust sts., St., St. Louis, Mo.
Cofrode, D. S., 31 Montgomery st., Jersey City, N. J.
Delaware Bridge Co., Trenton, N. J.
Mo. Valley Bridge & Iron Works, Leavenworth, Kansas.
Penna. Bridge Co., Beaver Falls, Pa.
Sooysmith & Co., 2 Nassau st., N. Y.
Union Bridge Co., 1 Broadway, N. Y.

Piles—Foundation.

Monks, John & Son, 130 Water st., N. Y.

Pile Drivers.

Cavanagh, Geo. H., 164 Devonshire st., Boston, M.
Cram, R. J. & A. B., 80 Griswold st., Detroit, Mich.
Dubois, Henry Sons, 118 South st., N. Y. **19.**
Dupuis, A. J., 15 Atwater st., Detroit, Mich.
Excelsior Iron Works Co., Columbus st., Cleveland, O.
Industrial Works, Bay City, Mich.
Monks, John, 130 Water st., N. Y.
Vulcan Iron Works, 86 N. Clinton st., Chicago, Ill.

Piling.

Ayer, Ed. E., 234 S. Water st., Chicago, Ill.
Bushnell, A., Kansas City, Mo.
Chatterton, J. B., E. end Plymouth av. bridge, Minneapolis, Minn. **54.**
Danner, A. C., Mobile, Ala. **69.**
DeCamp & Wilson, 88 Cortlandt st., N. Y.
Dunbar, M. P. Co., 18 B'way., N. Y.
Kaw Valley Lumber Co., 9th st. and B'way., Kansas City, Mo. **16.**

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Moss, T. J., Bk. Commerce Bldg., St. Louis, Mo.
Peare, P., 177 La Salle st., Chicago, Ill.

Pincers.

Claffy, John, 48 Dey st., N. Y. **91.**
Johnson, Wm., Newark, N. J.
Woodward, F. R., Hill, N. H.

Pins—Belaying.

Hicks, Chas. N., 175 Lewis st., N. Y.

Pipe—Bent.

National Pipe Bending Co., New Haven, Conn.

Pipe—Brake.

Mercer Rubber Co., Trenton, N. J.

Pipe—Cast Iron.

Atwood & McCaffrey, 60 3d av., Pitt'g., Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pitt'g., Pa.
Birmingham Iron Works, Birmingham, Ala.
Buffalo Cast Iron Pipe Co., 344 Exchange st., Buffalo, N. Y.
Carbon Iron & Pipe Co., (Ltd.), Mauch Chunk, Pa.
Chattanooga Foundry & Pipe Works, Chattanooga, Tenn.
Cincinnati & Newport Iron & Pipe Co., (The), Newport, Ky.
Clow, James B. & Co., Lake and Franklin sts., Chicago, Ill.
Colorado Coal & Iron Co., South Pueblo, Col.
Colwell Lead Co., 63 Centre st., N. Y.
Curtis, A. G. & Co., Cohoes, N. Y.
Davis & Fornum Mfg. Co., Waltham, M.
Davis & Kling, 95 5th av., Pitt'g., Pa.
Detroit Pipe & Foundry Co., Detroit, Mich.
Donaldson Iron Co., Eamus, Pa., and 226 Walnut st., Phila., Pa.
Drummond, M. J., 120 B'way., N. Y.
Eagle Iron Works, Terre Haute, Ind.
Eamus Pipe Foundry, Eamus, Pa.
Fisher, John J., Allentown, Pa., and 91 Liberty st., N. Y.
Fox, John, 160 B'way., N. Y.
Gloucester Iron Works, 6 N. 7th st., Phila., Pa. and Gloucester, Pa.
Hazleton Iron Works, Hazleton, Pa.
Hill City Pipe Works, (Glamorgan Iron Co.), Lynchburg, Va.
Howard, Childs & Co., 91 5th av., Pitt'g., Pa.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Jarecki Mfg. Co., Erie, Pa.
Kay Bros. & Co., 121 Water st., Pitt'g., Pa.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Lake Shore Foundry, ft. Alabama st., Cleveland, O.
Lebanon Mfg. Co., Lebanon, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Long, Dennis & Co., Louisville, Ky.
McNeal Iron & Pipe Co., Burlington, N. J.
Mellert Foundry & Machine Co., (Ltd.), Reading, Pa.
Michigan Pipe Co., Bay City, Mich.
Moore, Robert, 150 1st av., Pitt'g., Pa.
National Foundry & Pipe Works, (Ltd.), Scottdale, Pa.
New Phila. Pipe Works Co., New Phila., O.
Ohio Pipe Co., Columbus, O.
Pancoast & Rogers, 28 Platt st., N. Y.
Reading Foundry Co., (Ltd.), Reading, Pa.
Reilly, James, 230 West st., N. Y.
Roots, P. H. & F. M., Connersville, Ind.
Rusk Penitentiary, (State of Texas), Rusk, Texas.
Sayre Pipe Foundry, Sayre, Pa.
Shickle, Harrison & Howard Co., St. Louis, Mo.
South Pittsburg Pipe Works, South Pitt'g., Tenn.
Tredegar Co., (The), Richmond, Va.
Union Hydraulic Works, Germantown av., and 2d st., Phila., Pa.
Wainwright Mfg. Co., (The), 67 Oliver st., Boston, M.
Warren Foundry & Machine Co., Phillipsburg, N. J., and 160 B'way., N. Y.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Wood, Warren & Co., 115 B'way., N. Y.

Pipe—Coil.

Hohenstein Mfg. Co., 49 Dey st., N. Y.

Pipes—Drain and Sewer.

Akron Sewer Co., Akron, O.
Alderman Co., Collinsville, Conn.
Allen, G. P., Nantucket, M.
American Sewer Pipe Co., Akron, O
American Water & Gas Pipe Co., 98 Hudson st., Jersey City, N. J.
Anderson, J., Coldwater, Mich.
Andrews & Peck, 66 Market st., Hartford, Conn.
Anness, C. & Son, 8 Newark av., Jersey City, N. J.
Apple, T. P., Burlington, N. J.
Asbestine Stone Co., Grand Rapids, Mich.
Atwood, J. R., Plymouth, M.
Austin, M. S., New Britain, Conn.
Baldwin & Emerson, 88 E. Dedham st., Boston, M.
Balt. Drain and Sewer Co., 27 S. Gay st., Balt., Md.
Balt. Retort and Fire Brick Co., 20 S. Gay st., Balt., Md.
Balt. Terra Cotta Works, ft. Cross st., Balt., Md.
Bannon, P., 548 5th st., Louisville, Ky.
Bardolph Fire Clay Works, Bardolph, Ill.
Barrows, G. A. & Co., Connerville, Ind.
Barrows & Co., 66 B'way, N. Y.
Batchelder & Read, 70 Atwater st., E. Detroit, Mich.
Beach, M. & Son, New Milford, Conn.
Bedford & Hengsbach, Rensselaer, Ind.
Bennett Sewer Pipe Co., Jackson, Mich.
Berthelet, C. A., Milwaukee, Wis.
Berthelet, H. & Co., Milwaukee, Wis.
Berry & Ferguson, 44 Medford, Charlestown, M.
Bleg, H., 40 Wallabout st., B'klyn, N. Y.
Blackburn, Leroy & Leonard, Halls Corner, Ind.
Blackman, W. B. & Co., Ansonia, Conn.
Blackmer & Post, 6th and Locust sts., St. Louis, Mo. **18.**
Boice, G., Toledo, O.
Boston Drain Pipe Co., 8 Liberty sq., Boston, M.
Bosworth, S. B., 38 Front st., Hartford, Conn.
Bowman, Rohrer & Co., Council Bluffs, Iowa.
Brady & Maltby, 12 Henry st., Buffalo, N. Y.
Brandebery & Nash, Monroeville, Ind.
Branson & Co., Point Isabel, Ind.
Brewer & Perrin, Springfield, O.
Brewster & Burnett, Norwich, Conn.
Brockett, C. A. & Co., 800 Delaware st., Kansas City, Mo. **69.**
Brodie & Comfort, 668 N. Broad st., Phila., Pa.
Brooks, G., Orrington, Me.
Browell, J., 727 Montgomery st., San Francisco, Cal.
Brown, R., Norwich, Conn.
Brownlow, D. R., Middletown, Conn.
Buckeye Sewer Pipe Co., Akron, O.
Buel, J. & Son, Woburn, M.
Buffalo Sewer Pipe Co., Black Rock, Buffalo, N. Y.
Burch, Isaac O., New London, Conn.
Burnham, L. H., New Britain, Conn.
Burnham Bros., Minneapolis, Minn.
Burnham & Jones, St. Paul, Minn.
Burton, W., Norwich, Conn.
Bush & Patterson, Kalamazoo, Mich.
Bushnell Fire Clay, Tile & Brick Works, Bushnell, Ill.
Callan, M. & Son, Sandusky, O.
Calumet Fire Clay Co., Calumet, O.; 57 Kilby st., Boston, M., and 562 W. 6th st., Cincinnati, O.
Carlyle, L. L., whf. ft. Clay st., Newark, N. J.
Carlyle, Conley & Co., Toronto, O.
Carpenter & Ball, Troy, N. Y.
Carson, R. J. & Co., Omaha, Neb.

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Cary, E. M., East Saginaw, Mich., and 256 Trumbull st., Detroit, Mich.
Cary, M., Dundee, Ind.
Casco Carbonized & Cement Pipe Co., Portland, Me.
Case, E. H. & Co., New Corner, Ind.
Cassel, J. C., 2341 N. 7th st., Phila., Pa.
Cement Drain Pipe Co., 30 Francis st., Providence, R. I.
Central City Pipe Works, 38 40 South av., Syracuse, N. Y.
Chaffee, F. & Son, Rutland, Vt.
Chandler, S. D., Nashua, N. H.
Chase, C. S., Portland, Me.
Chatfield, A. & G. S., 39 Canal st., Waterbury, Conn.
Chatfield, E. A., 90-94 State st., New Haven, Conn.
Cheney, W. E. & Son, 558 River st., Troy, N. Y.
Cincinnati Gas Retort & Fire Brick Co., Burns st., 21st Ward, Cincinnati, O.
Clark, A., Norwich, Conn.
Clark, J. S., Westfield, Mass.
Clark, H. D. & Co., 961 Grand st., New Haven, Conn.
Clark, H. M., Covington, Ind.
Clark, N. & Sons, 22 California st., San Francisco, Cal.
Clarke, Wm. Wirt & Son, 115 S. Gay st., Balt., Md.
Classon, H. W. & Co., 515-521 S. Howard st., Balt., Md.
Clements Bros., 14 Vincent st., Cleveland, O.
Clevenger & Co., Dundee, Ind.
Cobb, J. C., 64 Macomb st., Detroit, Mich.
Colahan, J., 323 Columbus st., Cleveland, O.
Cole & Bell, Angola, Ind.
Collins, E. J., 521 River st., Troy, N. Y.
Collins & Collins, Ervin, Ind.
Colson, Chas. D., 20 W. Lake st., Chicago, Ill.
Columbus Sewer Pipe Co., Cleveland, O.
Conant, P. D. & Co., Fall River, Mass.
Conkling, H. J., 144 E. Pearl st., Cincinnati, O.
Coney, M. R., 626 Main st., Cincinnati, O.
Connelly, Thos., 12 4th av., Chicago, Ill.
Cooper, John, 413 Oakland st., Brooklyn, N. Y.
Copeland, J. C., 162 S. St. Paul st., Rochester, N. Y.
Cramer, G. R., 390 Central av., Cincinnati, O.
Crandall & Morrison, ft. Grand Division st., Troy, N. Y.
Cuddihy, J. J., 613 Albany st., Boston, M.
Cuddihy & German, 603 Albany st., Boston, M.
Cuenzer, W., 65 av. A, N. Y.
Cumming, L. C. & Co., Portland, Me.
Daniels, T. M., Toronto, O.
Darrow, M., New London, Conn.
Davis, J. C. & Bro., Dayton, O.
Dawson, J., Colfax, Ind.
Day, M., Cambridgeport, Mass.
Day, Marcellus, 21 Devonshire st., Boston, M.
Daykise Bros., 398 Pearl st., Cleveland, O.
Dearth & Yohey, Royerton, Ind.
Dee, William E., 160 La Salle st., Chicago, Ill.
Deeter, B. F., Columbia City, Ind.
Degnan, P. & T., Toledo, O.
Denison, T. R., Bay City, Mich.
Dennon, G., 77 Champlain st., Cleveland, O.
Detroit Cement Sewer Pipe Works, 256 Trumbull av., Detroit, Mich.
Devers, C., York, Pa.
Dexter, A. & Co., 36-38 Hannibal st., Cincinnati, O.
Dickson Mfg. Co., Scranton, Pa.
Dobbs, J. C., Mantua, N. J.
Dodds, J. C., Gloucester City, N. J.
Doolittle, E. T., Bridgeport, Conn.
Douglas & Douglas, Fort Branch, Ind.
Dowell, B. M., New Castle, Ind.
Drausfield & Husband, New Harmony, Ind.
Draper, J., Plantation st., nr. Bloomingdale, Worcester, M.
Driscoll, J. R., Springfield, M.
Drummond, M. J., 120 B'way, N. Y.
Duffett & Ramsey, Leavenworth, Kans.
Dunbar, J. H., 57 Kilby st., Boston, M.
Dunn, Wm. T. & Co., 219 Lacock st., Allegheny, Pa.
Dunspaugh, W. F., c. Court & Franklin sts., Buffalo, N. Y.
Earley & Oberholtzer, Ervin, Ind.
Eichelberger, T. D. & Sons, Dayton, O.
Einfeldt & Eastman, 4 blocks W. of Depot (Oak Park P. O.), Chicago, Ill.
Elizabeth Clay Works, Elizabeth, N. J.
Emerson & Rutledge, Oakland City, Ind.
Empire Fire Clay Co., Empire, O.
Evans & Howard, 916 Market st., St. Louis, Mo.
Fairfield, J. C., 963 Superior st., Cleveland, O.
Falls City Terra Cotta Works, 548 5th st., Louisville, Ky.
Field, Granville H., Auburn, Me.
Finegan, J., Belden av., c. Fulton, Syracuse, N. Y.
Fire Proof Building Co. of N. Y., Elizabeth, N. J.
Fiske, Coleman & Co., 62 Congress st., Boston, M.
Fitch, H. B., Rome, N. Y.
Fitchburg Carbonized Stone Pipe Co., Fitchburg, M.
Florida Stone Pipe Co., Jacksonville, Fla.
Floyd, Halleck & Son, Dublin, Ind.
Frank, H., 207 Western av., Cincinnati, O.
Frank, M. G., 800 Carson st., Pitt'g., Pa.
Frederick & Shorthill, Marshalltown, Ia.
Freeman Bros., 25 Penn av., Pitt'g, Pa.
French, M. J., Syracuse, N. Y.
French & Sennet, 52 W. Railroad st., Syracuse, N. Y.
Frish & Fickle, Lynn, Ind.
Fuller, W. & Sons, 74 Pier st., Albany, N. Y.
Forsyth, C., 145-251 Plane st., Newark, N. J.
Fox, John O. & Co., Putnam, Conn.
Foye & Co., 1 Foye pl., Jersey City, N. J.
Garfield, Fertig & Co., 65 Sandusky st., Allegheny, Pa.
Gault, M. & Son, 700 W. Pratt st., Balt., Md.
Gearing, H. C., S. 20th and Sidney sts., Pitt'g., Pa.
Genoa & Rocky Ridge Lime Co., Toledo, O.
Geuter, R., Madison, Ind.
Geuter, F., Madison, Ind.
Gibson, H., ft. Allen st., Balt., Md.
Gladding, McBean & Co., 1358 Market st., San Francisco, Cal.
Goff, J. C., 66 S. Water st., Providence, R. I.
Good & Sowash, Sulphur Springs, Ind.
Goodrich, G. D. & Co., 68 Water st., Boston, M.
Gossin, F., 1919 Cherry st., Phila., Pa.
Gove, A. & Son, 212 Border st., E. Boston, M.
Gt. Western Brick & Sewer Pipe Co., Toronto, O.
Great Western Fire Clay Co., Toronto, O.
Greenley, A. M., 18 Jay st., N. Y.
Gunning, John S., 99 Main st., Hartford, Conn.
Gwynne, Pollett & Evans, Gwyuneville, Ind.
Hall & Sons, 58 Chapin Block, Buffalo, N. Y.
Hallock, F. & Co., Birmingham, Conn.
Halpen, W. J., 205-211 B'way, Albany, N. Y.
Ham & Carter, 730 Albany st., Boston, M.
Hamilton Pottery, c. Bush and Smith sts., Brooklyn, N. Y.
Hammer, J., Council Bluffs, Iowa.
Hance & Northcutt, Troy, O.
Hargrave & Scheiler, New Castle, Ind.
Harlow & Bailey, Plymouth, M.
Harris, J. M., Ironton, O.
Harris, W. W., 142 3d st., Louisville, Ky.
Harrison & Wiley, Bethel, Ind.
Hart & Vickery, Annapolis, Ind.
Hartford Cement Tile Co., 69 Commerce st., Hartford, Conn.
Harting & Wind, St. Rosa, O.
Hartley & Stephen, Aroma, Ind.
Hartsock, J. S., Columbia City, Ind.
Harvey, Moland & Co., 620 Arch st., Phila., Pa.
Hawkins & Tipton, 548 5th st., Louisville, Ky.
Hayden, P. & Sons, Columbus, O.
Haydenville Mining & Mfg. Co., 1619 S. State st., Chicago, Ill., and 160 W. Long st., Cleveland, O.
Heaphy, W. A., Lee, Mass.
Helnson, J. J. & Co., Dayton, O.
Henderson, J. H., Watertown, N. Y.
Hiatt & Hutchins, Sheridan, Ind.
Hill Sewer Pipe Co., Akron, O.
Holman, O. L., Creston, Iowa.
Hotchkiss Bros., Torrington, Conn.
Houghten, H., 885 Woodbridge st., Detroit, Mich.

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Houston & Harris, Minneapolis, Minn.
Hoxie, T. W. & Co., 236 State st., Boston, M.
Humphrey Dodge & Smith, Concord, N. H.
Hurley, J. & T., S. W. c. Griswold and Jefferson sts., Detroit, Mich.
Hunt & Morgan, Spartanburg, Ind.
Hunter, A. W., N. Adams, Mass.
Hutchins, S., Lynn, Ind.
Hydraulic Cement & Pipe Co., Harrisburg, Pa.
Iowa Pipe & Tile Co., Creston, Iowa.
Jackson Bros., 92 3d av., Albany, N. Y.
Jackson Fire-Clay Co., Jackson, Mich.
Jackson & Garrett, Liberty Centre, Ind.
James, R. C. & Co., Kendallville, Ind.
Jenkins, Reuben, 58 S. Clinton st., Chicago, Ill.
Jordan, J. W., 609-611 Main st., Worcester, M.
Kansas City Frear Stone & Pipe Mfg. Co., Kansas City, Mo.
Kansas City Sewer Pipe Co., 1007 Walnut st., Kansas City, Mo.
Kendall, C. A., Lowell, M.
Kingsbury & Peck, Monticello, Ind.
Kohlmeyer, H., McMillin st., (Walnut Hills) Cincinnati, O.
Kunz, D., Sandusky, O.
Laclede Fire Brick Mfg. Co., 901-905 Pine st., St. Louis, Mo.
Lake, C. S., Rockingham, Vt.
Lake & Bassett, E. Mohawk st., c. 9th, Oswego, N. Y.
Lamb, W. & Co., 15 Province st., Boston, M.
Lamond, A., Lamond's, Wash'n., D. C.
Landers & Roskuski, Bringhurst, Ind.
Lane, T. A., Manchester, N. H.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Lawrence, C. A., Beverly, M.
Lee, Chas. M., Elmira, N. Y.
Leggett, Wm. T., 969 Liberty av., Pitt'g., Pa.
Leonard, C. T. & Son, Norwalk, Conn.
Lewis, D. W., 80 Water st., Boston, M.
Lewis, E. J., (Mfrs.), Birmingham, Conn.
Lewis & Co., 716 Penn av., Pitt'g., Pa.
Lewis W. Wales & Co., 9 Perkins st., Meriden, Conn.
Littlefield, J. & Co., Brewer, Me.
Loch, Michael, 725 Gratiot av., Detroit, Mich.
Long Island Drain Pipe Works, Long Island City, N. Y.
Loughridge & Bond, 2309 N. 7th st., Phila., Pa.
Lovell, A. B., (Mfrs.), 100 May st., Worcester, M.
Lyth, J. & Sons, Wellsville, O., and 48 W. Eagle st., Buffalo, N. Y.
McBride, G. & Co., Trinity Springs, Ind.
McCabe, P., 102 Lake st. Pier, Albany, N. Y.
McCammon, L. H., 582 W. 6th st., Cincinnati, O.
McConnell & Jones, 79 Exchange st., Rochester, N. Y.
McClure, J., Dayton, O.
McCracken, J. E., Front st., c. Pike, Cincinnati, O.
McDonough, J., Grand Rapids, Mich.
McGuire, G., Center st., c. W. River, Cleveland, O.
McKallip, L. S. & Co., 12th & Pike sts., Pitt'g., Pa.
McMahon, Porter & Co., New Cumberland, W. Va.
Magee, E. & Co., 32 Park Way, Allegheny, Pa.
Maudery, L., 156-158 S. St. Paul st., Rochester, N. Y.
Martin, F. S., Minneapolis, Minn.
Martin, J. & Co., Attica, Ind.
Marvin, D. W., 155 W. Fayette st., Syracuse, N. Y.
Mathewson, S., Flint, Mich.
Mankato Drain Tile Works, Mankato, Minn.
Mayne & Palmer, Council Bluffs, Iowa.
Mazurie Bros., Uhrichsville, O.
Messner & Co., Cedar Rapids, Iowa.
Miley, J. D. & Co., Waltz, Ind.
Millcreek Lime Stone & Coal Co., Springfield, O.
Mission Pottery Co., 945 Market st., San Francisco, Cal.
Mitchell Clay Mfg. Co., 20 S. 11th st., St. Louis, Mo.
Montague & Co., Chattanooga, Tenn.
Morgan, W. J. & Sons, Gilman, Ind.
Morley, Ewen & Co., East Saginaw, Mich.
Morris, W. H. & Co., 172 Lorned st., w. Detroit, Mich.
Mott, J. L., Iron Works, (The), 88 Beekman st., N. Y.
Murphy & Trimble, Windfall, Ind.
Nagle & Costolove, Elmira, N. Y.
Nelson, W., 34 Park Row, N. Y.
New Haven Pipe Co., 962 Grand st., New Haven, Conn.
Nichols, Read, Bath, Me.
Nicolai, J. V., Elm st., c. Water, Cincinnati, O.
North Western Pipe & Paving Co., Minneapolis, Minn.
N. U. Walker Clay Mfg. Co., Walkers, O.
Oak Glen Drain Tile Co., 323 S. Western av., Chicago, Ill.
Ober, P. E., Beverly, M.
Oberholtzer, G. W., Sioux City, Iowa.
Ogden, I. & Son, 146 Chestnut st., Newark, N. J.
Ohio Sewer Pipe Co., Wilshire Bldg., Cleveland, O.
Ottumwa Artificial Stone & Pipe Works, Ottumwa, Iowa.
Orlando Pipe Works, Orlando, Fla.
Osbom, J. H., 8 Bellville av., Newark, N. J.
Otis & Corsline, 55 Powers' Bldg., Rochester, N. Y.
Otis & Gorsline, 484 E. 138th st., N. Y.
Page, J. M. & Co., Naugatuck, Conn.
Paine, J. A., Danielsonville, Conn.
Paisler, Charles S., 118 N. Water st., New Bedford, M.
Patterson, H. S., Gorrington, Conn.
Pattison, J. L. & Co., 297 Wabash av., Chicago, Ill.
Parsons & Peterson, Salem, M.
Paul, J. B. & Co., Chelsea, M.
Peck, Austin L., 24 Meadow st., Waterbury, Conn.
Peck, Seth L., Central wh'f., Norwich, Conn.
Penna. Mfg., Mining & Supply Co., 1004 Penn av., Pitt'g., Pa.
Perkins, H. A., Stamford, Conn.
Perkins & Perkins, Des Moines, Iowa.
Pierce Cement Works, 273 Main st., Bridgeport, Conn.
Pierce Mfg. Co., (The), 159 N. Wash'n. av., Bridgeport, Conn.
Pittsburgh Builders' Supply Co., 36 Lewis blk., Pitt'g., Pa.
Pivear & Jones, Lynn, M.
Portland Cement Pipe & Stone Co., 24 Plum st., Portland, Me., and 72 Water st., Boston, M.
Portland Stone Ware Co., 8 Liberty sq., Boston, M., and Portland, Me.
Post, J. E., Rutland, Vt.
Potomac Terra Cotta Co., 1411 G st., Washington, D. C.
Poughkeepsie Pottery, Poughkeepsie, N. Y.
Powell, J. G., Metea, Ind.
Prentice & Hackett, 1009 Liberty av., Pitt'g., Pa.
Prindle, W. F., Northampton, M.
Providence Artificial Stone & Drain Pipe Works, 765 N. Main st., Providence, R. I.
Purdy, Baird & Co., Salem, O.
Racine Cement & Pipe Co., Racine, Wis.
Rader, G. W. & Co., 611 W. 51st st., N. Y.
Rand, E. A. & Son, North Adams, M.
Ransome, E. L., 402 Montgomery st., San Francisco, Cal.
Ray, J. H., Greenwich, Conn.
Ray Bros. & Collins, Deer Creek, Ind.
Raymond Bros., 10 Washington st., Norwalk, Conn.
Reed, N., Bath, Me.
Reeve, A., Camden, N. J.
Remington, H. H., 76 5th av., Chicago, Ill.
Retherford & Mann, Bringhurst, Ind.
Rhoads & Ramsey, 107 La Salle st., Chicago, Ill.
R. I. Cement Drain Pipe Co., 30 Francis st., Providence, R. I.
Richardson, E. M., Waltham, M.
Rimington, S. A., 42 B'way, N. Y.
Ringwalt, W. H., Halls Corner, Ind.
Ripley Sons, Rutland, Vt.
Robbins, G. B. & Co., 2477 3d av., N. Y.
Roberts & Clark, Marion, O.
Robertson & Frost, New Lisbon, O.
Robinson, C. H., Nantucket, M.

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Robinson Bros & Co., Akron, O.
Robinson & Klugh, 52 Jefferson av., Detroit, Mich.
Robinson & Reed, 52 Jefferson av., Detroit, Mich.
Roby, D. & Co., 280 Causeway st., Boston, M.
Rochester Lime Co., 203 W. Main st., Rochester, N. Y.
Rochester Sewer Pipe Co., Rochester, N. Y.
Rose Stone & Pipe Co., (The), Cleveland, O.
Ross, J. H., 141 Erie st., Buffalo, N. Y.
Ross, W. E., 144 Webster st., Allegheny, Pa.
Sackett Bros., Springfield, M.
Salamander Works, 61 Bethune st., N. Y.
Sayre, J. R., Jr., River st. nr. Central Depot, Newark, N. J.
Schlandecker, G., Erie, Pa.
Schwarm & Irwin, 1002 Liberty av., Pitt'g., Pa.
Sebrel, P., Markleville, Ind.
Seymour, W. J., 102 Ferry st., Troy, N. Y.
Shea, Dennis, Portsmouth, N. H.
Shearer & Mace, Lexington, Ind.
Sheldon, C. A., 69 Atwater st., Detroit, Mich.
Shiner, J., Markleville, Ind.
Shortridge & Thomas, New Lisbon, Ind.
Shriver, Weatherly & Co., Grand Rapids, Mich.
Sibley, F. B. & Co., 340 Water st., Detroit, Mich.
Sizelow Bros., Point Isabel, Ind.
Skibowski, August, Dequindre st., and Forest av., Detroit, Mich.
Smith, A. J., Branford, Conn.
Smith, E. B., Middletown, Conn.
Smith, E. P., Muncie, Ind.
Smith, J. O., 383 Bryant st., Buffalo, N. Y.
Smith, L. A. & Co., Salem, M.
Smith, P., Jamestown, Ind.
Smith & Bro., Fort Branch, Ind.
Smith & Ferguson, Perrysville, Ind.
Snell, Samuel, Holyoke, M.
Spaulding, J. M., 537 Fort st., Detroit, Mich.
Sperry, G. P., Cuyahoga Falls, O.
Stamford Fire Brick & Stove Lining Works, Stamford, Conn.
Standacher, L., 1742 N. 11th st., Phila., Pa.
Standard Sewer Pipe Co., 8 Caledonia av., Rochester, N. Y.
Staples Bros., Lowell, M.
Starr, C. A. & Co., Dayton, O.
Steinheiser, Henry & Son, 745 Gratiot av., Detroit, Mich.
Stevens, C. W., Lansing, Mich.
Stewart & Co., 540 W. 19th st., N. Y.
Stillman, H. A. & Co., 230 State st., Hartford, Conn.
Stine, J., Marshalltown, Iowa.
Stueve, H., 534 John st., Cincinnati, O.
Sullivan & Johnson, New Lisbon, Ind.
Sumnee, A. W., St. Louis, Mo.
Taylor, A., Springfield, O.
Taylor, C., Burns, 21st Ward, Cincinnati, O.
Taylor, C. C. & Son, Springfield, O.
Taylor, Bullock, 935 Liberty av., Pitt'g., Pa.
Templen & Johnson, Blountsville, Ind.
Thistlewaite, H. J., Sheridan, Ind.
Thompson & Bethune, Concord, N. H.
Thompson & Co., Haverhill, M.
Tily, A., 89 E. Genesee st., Syracuse, N. Y.
Todd, S. E., 350 Southbridge st., Worcester, M.
Trefethen, R. & Co., Haverhill, M.
Trefethen, Saltmarsh & Co., Dover, N. H.
Trenton Terra Cotta Co., Trenton, N. J.
True, W. D., Norwich, Conn.
Tuttle & Corey, Des Moines, Iowa.
Uhl, A. & L., Evansville, Ind.
Union Mfg. Co., West Union, Iowa.
Union Pottery & Drain Pipe Works, Newark, N. J.
U. S. Fire Clay Co., (The), Wilshire Bldg., Cleveland, O.
Usher & Tinker, Plainville, Conn.
Utica Cement Pipe Works, 183 Genesee st., Utica, N. Y.
Utica Sewer Pipe & Terra Cotta Co., Utica, Ill.
Valentine & Gould, Yonkers, N. Y.
Vincennes Calorific Buck & Tile Mfg. Co., Vincennes, Ind.
Waldo Bros., 85 Water st., Boston, M.
Walker, Armentrout & Co., New Market, Ind.
Walker, N. U. Clay Mfg. Co., 102 3d st., Louisville, Ky., and c. 10th st. and Penn av., Pitt'g., Pa.
Walker, W., 121 Clinton st., Albany, N. Y.
Wall, W. P., Clarks Hill, Ind.
Warner, H. A., New Haven, Conn.
Warren Foundry & Mach. Co., Phillipsburgh, N. J., and 160 B'way, N. Y.
Warrington Tile Co., Warrington, Ind.
Wassall Fire Clay Co., Cleveland, O.
Watts, Hill & Mayfield, Bruceville, Ind.
Wausan Sewer Pipe Co., Wausan, Wis.
Weeks & Barri, 86 Bennington st., Boston, M.
Weyand, J., Dayton st., c. Freeman av., Cincinnati, O.
Whelan, D. J., 104 Jefferson st. bet. 4th and 5th, Troy, N. Y.
Wheeler, E., 48 Crescent av., Bridgeport, Conn.
Wheeler & Howes, 336 Main st., Bridgeport, Conn.
Whitcomb & Rush, Clinton, Ind.
Whitehall Fire Clay Works, 286 S. Canal st., Chicago, Ill.
Whitmore, W. M. & Co., Dayton, O.
Whitmore, Rauber & Vicinus, 279 St. Paul st., Rochester, N. Y.
Wiggin, G. W., Exeter, N. H.
Wilcox, J. P. & Co., Springfield, M.
Wilder & Kimball, Hingham, M.
Wilkinson & Laning, Bellmore, Ind.
Williams, Norman A., 219 E. Washn. st., Chicago, Ill.
Wilson, Wm. L., (Ltd.), 507 Chestnut st., Phila., Pa.
Wilson & Co., 18th st., c. 11th av., B'klyn, N. Y.
Wilson & Baillie Mfg. Co., Union st. and Gowanus Canal, B'klyn, N. Y.
Winslow & Co., Portland, Me.
Wood, C. A. & W. W., 1227 Euclid av., Cleveland, O.
Woodruff, C. L., 191 B'way, Albany, N. Y.
Wood, F. G., Newburgh, N. Y.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Wood Bros., 40 Michigan st., Cleveland, O.
Yonart & Walker, Amboy, Ind.
Young, Arthur & Co., 54 Kilby st., Boston, M.
Young, D. H., Manchester, N. H.
Zipp, J., Bloomfield av. nr. Canal, Newark, N. J.

Pipes—Exhaust.

Esterbrook, Wm., 311 Cherry st., Phila., Pa.

Pipes—Flange.

Drummond, M. J., 95 Liberty st., N. Y.
Gloucester Iron Works, 6 N. 7th st., Phila., Pa.
Mellert Foundry & Machine Co., (Ltd.), Reading, Pa.
Ohio Pipe Co., (The), Columbus, O.
Warren Foundry & Machine Co., Phillipsburgh, Pa., and 160 B'way, N. Y.

Pipe—Galvanized Iron.

Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. 111.
Cunningham Iron Works Co., 109 Milk st., Boston, M.
Delaware Iron Co., 222-224 S. 3d st., Phila., Pa.
Walworth Mfg. Co., 16 Oliver st., Boston, M

Pipes—Lead.

Abraham, John D., 21 E. 9th st., Cincinnati, O.
Allen, W. L., 1229 Callowhill st., Phila., Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pitt'g., Pa.
Boston Lead Mfg. Co., 162 Congress st., Boston, M.
Cincinnati Lead Pipe & Sheet Lead Works, 21 E. 9th st., Cincinnati, O.
Clark & Hawley, 15-19 E. 9th st., Cincinnati, O.
Clark & Mandeville, Rochester, N. Y.
Colwell Lead Co., 63 Centre st., N. Y.
Cornell Lead Co., Buffalo, N. Y.
Curtis & Co., Cohoes, N. Y.
Detroit Lead Pipe & Sheet Lead Works, Detroit, Mich.
Dubois, Addison & Son, 512 W. 30th st., N. Y.
Gerdes, F. W. & Bro., 1005 Penna. av., Pitt'g., Pa
Gibson & Price, Cleveland, O.

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Granniss, James E., 46 Cliff st., N. Y.
Kellogg & Douglass, Newark, N. J.
Keystone Lead Works, 603 Sansom st., Phila., Pa.
Leroy Shot & Lead Mfg. Co., 261 Water st., N. Y.
McCollum, H. & Co., 262 Race st., Cincinnati, O.
Mayor, Lane & Co., 119 Walker st., N. Y.
Merrie, Verhage & Co., 11 W. 7th st., Cincinnati.
N. Y. Co-operative Lead Wks, 525 E. 19th st., N.Y.
N. Y. Smelt'g & Refining Co., West, c. Jane, N.Y.
Omaha Lead Pipe Co., Omaha, Neb.
Phillips, Thomas & Co., Providence, R. I.
Pierce, Butler & Pierce, 13 S. Clinton st., Syracuse, N. Y.
Price, Wm. G. & Co., 15 Wood st., Pittsb'gh, Pa.
Raymond, J. N., 55 W. Lake st., Chicago, Ill.
Robertson, Jas. & Co., 210 S. Howard st., Balt., Md.
Salem Lead Co., Salem, Mass.
Tatham & Bros., 82 Beekman st., N. Y.
Tillinghast, Clark P., 146 1st st., B'klyn, N. Y.

Pipes—Oil Line.

Byers, A. M. & Co., Pittsburgh, Pa.
Delaware Iron Co., 222-324 S. 3d st., Phila., Pa.

Pipe (Iron) Rustless.

Bailey, Farrell & Co., 619 Smithf'd st., Pitt'g, Pa.

Pipe (Iron), Water, Gas and Steam.

Abendroth & Root Mfg. Co., 28 Cliff st., N. Y. **iii.**
Abright's Sons & Co., Allentown, Pa.
Ahrens, Welker & Ryan, 467 E. Market st., Louisville, Ky.
Ahrens & Ott Mfg. Co. (The), 231 to 237 5th st., Louisville, Ky.
Allison Mfg. Co., 70 Kilby st., Boston, Mass.; 32 Walnut st., Phila., Pa.; 8 Smithfield st., Pittsburgh, Pa.
Allsopp, T. J., 92 Pearl st., B'klyn, N. Y.
Ambrose & Cooper, 675 W. 6th st., Cincinnati, O.
American Enamel Co., 17 Warren st., Providence, R. I.
American Gas & Water Pipe Co., 98 Hudson st., Jersey City, N. J.
American Tube W'ks., 88 Lake st., Chicago, Ill.
Am. Tube & Iron Co., 52 S. Canal st., Chicago, Ill.; 98 John st., N. Y., 167 1st st., Pittsb'g, Pa.
Am. Water & Gas Pipe Co., Jersey City, N. J.
Arnin & Co., 13 Adams st., B'klyn, N. Y.
Ashcroft, C. E., 218 Betts st., Cincinnati, O.
Asphalt Wrought Iron Pipe Co., c. 6th and Wyandotte sts., Kansas City, Mo.
Attlesey, J. 321 Vine st., Cincinnati, O.
Atwood & McCaffrey, 50 3d av., Pittsburgh, Pa.
Aylward, N. K., 436 W. Court st., Cincinnati, O.
Ayrault, Charlton & Co., Tonawanda, N. Y.
Bailey, J. & Son, Middletown, Conn.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa
Baker, H. A., 375 Broad st., Newark, N. J.
Baker, H. R., Lowell, Mass.
Barr, Edward & Co. (Ltd.), 78 John st., N. Y.
Barrows & Co., 64 B'way, N. Y.
Beggs, H., 227 W. 4th st., Cincinnati, O.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Belknap Mfg. Co., 99 Water st., Bridgeport, Ct.
Benjamin & Eames, 434 Water, Bridgeport, Ct.
Benner, H. T. A. & Co., 40 Dey st., N. Y.
Benton & King Co., 35 Dey st., N. Y.
Best, Fox & Co., 1st av., c. Ferry st., Pittsb'gh, Pa.
Beyers, A. M. & Co., Pittsburgh, Pa.
Bird, Wm. Edgar & Co., 35 Dey st., N. Y.
Birkett, James W., 67 Smith st., B'klyn, N. Y.
Blackmann, W. B. & Co., Ansonia, Conn.
Blackstone L. & Co., Portland, Me.
Blackslee, E. G., Mfg. Co., 78 Centre st., N. Y.
Bogue, John E., 218 La Salle st., Chicago, Ill.
Bonnel, J. M., Son & Co., 196 Market st., and 12 Ferry st., Newark, N. J.
Booth, S. & Son, 45 E. Main st., Waterbury, Ct.
Bosworth, N. A., 253 Asylum st., Hartford, Ct.
Bourbon Copper and Brass Works, 198 to 204 E. Front st., Cincinnati, O.
Braman, Dow & Co., 3 to 6 Haymarket sq., Boston, Mass.; Worcester, Mass.
Brand & Reichard, Minneapolis, Minn.
Brewer, S. D., 52 B'way, N. Y.
Bridgeport Boiler Works, Bridgeport, Conn.
Brines, Chase & Co., N. W. Noble and 12th sts., Phila., Pa.
Brooks & Kemper, Dayton, O.
Brown, Owen & Taylor, 14th st., c. Buttonwood st., Phila., Pa.
Burritt, C. W., Norwalk, Conn.
Benton & King Co., 82 John st., N. Y.
Buffalo Cast Iron Pipe Co., Buffalo, N. Y.
Bunker, W. B. & Co., Lewiston, Me.
Burns, T. H., 20 Commerce st., Newark, N. J.
Bush, W. R., Fall River, Mass
Busch, G. H. L., 541 Main st., Cincinnati, O.
Byers, A. M. & Co., 98 Water st., Pittsburgh, Pa.; 26 W. Lake st., Chicago, Ill.
Campbell, Felix, 79 John st., N. Y.
Camden Iron Works, 400 Chestnut st., Phila., Pa.
Cantine & Kay, Alliance, O.
Carbon Iron & Pipe Co., Parryville, Pa.
Cardell, J. D., 1900 Passyunk av., Phila., Pa.
Carr, A. & W. S. Co., 62 John st., N. Y.
Carroll, R., 51 E. 3d st., Cincinnati, O.
Cassidy & Adler, 512 6th av., N. Y.
Central Falls Steam Heating Co., Central Falls, R. I.
Chaler & Becker, 8 Champlain st., Cleveland, O.
Chattanooga Foundry & Pipe Works, Chattanoogo, Tenn.
Chelmsford Foundry Co., 131 Portland st., Boston.
Chester Pipe & Tube Co. (The), 261 S. 4th st., Phila., Pa.
Chicago Tubular Well Co., 68 W. Lake st., Chicago, Ill.
Cincinnati Lead Pipe & Sheet Lead Works, 21-23 9th st., Cincinnati, O.
Cincinnati & Newport Iron & Pipe Co., Newport, Ky.
Clark & Hawley, 15 E. 9th st., Cincinnati, O.
Clow, James B. & Son, 222 E. Lake st., Chicago, Ill.
Cochran, J. L., 219 B'way, Cincinnati, O.
Coffey, P. T., 18 W. 8th st., Cincinnati, O.
Collins, F. F., San Antonia, Tex.
Collins, H. E. & Co., 34 Lewis Blk., Pittsb'gh, Pa.
Columbus Brass Steam Pipe Works Co. (The), 240-242 N. High st., Columbus, O.
Colvin, M. R., Worcester, Mass.
Conn. Patent Water Pipe Co., New Haven, Conn.
Cooper, L. W., Taunton, Mass.
Corning, Jasper, 82 John st., N. Y.
Cowles, L. W. & Co., 40 State st., Hartford, Conn.
Cowley, R., Meriden, Conn.
Crane, M. H., 189 W. Pearl st., Cincinnati, O.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Cunningham, J. H., 109 Milk st., Boston, Mass.
Curtis & Co., Cohoes, N. Y.
Daly, M. J., 80 Meadow st., Waterbury, Conn.
Dannenhold, B. & Co., 99 W. 5th st., Cincinnati, O.
Davis, Frank B., 1852 Memphis st., Phila., Pa.
Davis, H. Haverhill, Mass.
Davis, H. H. 99 Water st., Pittsburgh, Pa.
Davis, John & Co., 79 Michigan st., Chicago, Ill.
Davis & Farnum Mfg. Co., Waltham, Mass.
Delaware Iron Co., New Castle, Del.
Denny Bros. & Co., 20 Atlantic st., Newark, N. J.
Detroit Lead Pipe and Sheet Lead Works, 57 2d st., Detroit, Mich.
Detroit Pipe and Foundry Co., Detroit, Mich.
Dickinson, A. P., Rockville, Conn.
Dickson Mfg. Co., Scranton, Pa.
Dilks, J. H., 261 S. 4th st., Phila., Pa.
Dingler, L. E., 290 Cutter st., Cincinnati, O.
Donaldson, T. S., South Norwalk, Conn.
Donaldson Iron Co., Emaus, Pa.
Drummond, M. J., 120 B'way, N. Y.
Duffy & Kosiol, 433 W. Market st., Louisville, Ky.
Duke, H. T. & Co., 168 W. 2d st., Cincinnati, O.
Dumont, C. F., 109 E. Front st., Cincinnati, O.
Du Quoin Iron Works, Du Quoin, Ill.
Eagle Steam Pipe Works, St. Louis, Mo.
Eaton, Cole & Burnham Co. (The), 69 Water st., Bridgeport, Conn.; 82 Fulton st., N. Y.
E. G. Blakslee Mfg. Co., 76-78 Centre st., N. Y.
Eichert, G., 665 Vine st., Cincinnati, O.
Eisenmenger & Beechner, Franklin, O.

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Elzenhoefer, G., 356 Freeman ave., Cincinnati, O.
Epping, Carpenter & Co. (Ltd.), 2410 Penn ave., Pittsburgh, Pa.
Erie City Foundry, Erie, Pa.
Essex Iron Works, 53 to 57 N. J. R. R. ave., Newark, N. J.
Etna Iron Works (Ltd.), New Castle, Pa.
Evarts, W. R., & Co., 100 E. Grand st., New Haven, Conn.
Farnsworth, J. B., Leominster, Mass.
Farrell & Conaton, Lowell, Mass.
Faulkner, F. G., Co. (The), 41 Dey st., N. Y.
Felix, L., 891 Central ave., Cincinnati, O.
Fewlass, G., 118 E. 2d st., Cincinnati, O.
Fieldhouse & Dutcher Mfg. Co., 30-32 W. Monroe st., Chicago, Ill.
Fillebrown, A. A., Ayer, Mass.
Fisher, Hiram H., Allentown, Pa.
Fisher, John J., 91 Liberty st., N. Y.
Fitzmorris & Smith Foundry, Factory & Supply Co., Kendre and Central ave., Cincinnati, O.
Florence Iron Works, 400 Chestnut st., Phila., Pa.
Flynn, J. L., Springfield, O.
Folsom, E. & Co., Exeter, N. H.
Ford & Kendig, 712 Filbert st., Phila., Pa.
Forsyth, W. J., 203 Elm st., Cincinnati, O.
Fox, John, 160 B'way, N. Y.
Freeman, J. F., Woburn, Mass.
Fitzgerald, J., 7 N. J. R. R. ave., Newark, N. J.
Fuller, Dana & Fitz, 110 North st., Boston, M.
Gallison, W. H., 42 Oliver st., Boston, Mass.
Georgia Steam & Gas Pipe Co., Columbus, Ga.
Getze & Reeves, 13 N. 5th st., Phila., Pa.
Geyer, Henry, St. Louis, Mo.
Gibbons & McCormick, Dayton, O.
Gibraltar Iron Works (Simon Seyfert), Reading, Pa.
Gibson, J. A., 215 Broadway, Cincinnati, O.
Gibson, T. Co. (The), 273 Walnut st., Cincinnati, O.
Gilchrist & Gorham, 207 Congress st., Boston, Mass.
Gloucester Iron Works, Gloucester City, N.J. and 6 N. 7th st., Phila., Pa.
Gordon & Gilbert, 218 New st., Phila., Pa.
Goodhue & Birnie, 253 Main st., Springfield, Mass.
Goodsell, Z., 383 Main st., Bridgeport, Conn.
Green, W. H., 34 S. 2d st., Phila., Pa.
Groenewald, J. & Son, Toledo, O.
Grosscup, C. G., Shelby, O.
Haight & Holmes, Stamford, Conn.
Hall, Henry D., Salem, N. J.
Haxton Steam Heater Co., Kewanee, Ill.
Hayes, Geo. B., 344 Exchange st., Buffalo, N. Y.
Head's Iron Foundry, 105 Broad st., Utica, N. Y.
Heath, W. G., 175 Eddy st., Providence, R.I
Hedges & Bros., 25 N. J. R. R. av., Newark, N. J.
Hendy, Joshua, Machine Works, 39 Tremont st., San Francisco, Cal.
Herbert, H., 138 Poplar st., Cincinnati, O.
Hesterberg, R. & Co., Pearl, c. Plum st., Cincinnati, O
Hewes & Phillips Iron Works (The), Orange, c. Ogden st., Newark, N. J.
Hoey, T., 87 Border st., Boston, Mass.
Hogan, P. J., 82 Sycamore st., Cincinnati, O.
Holbrook, M. G., North Adams, Mass.
Holloway, E., 110 White st., New York.
Hooker, C. K., Cambridgeport, Mass.
Howard, Childs & Co, 91 5th av., Pittsburgh, Pa.
Howland, H. T. & Son, Felt's Mills, N. Y.
Hunter, A. W., North Adams, Mass.
Hunter, J., 16 Grand st., Waterbury, Conn.
Hunter-Keller Mfg. Co. (The), 144 Centre st., New York.
Hunter & Dickson, 243 Arch st., Phila., Pa.
Huntting & Co., Middletown, Conn.
Illinois Malleable Iron Co., 581 Diversey av., Chicago, Ill.
Jackson Wooden Mfg. Co., Berwick, Pa.
Jarner, Jacob, 84 John st., N. Y.
James, C. E. & Co., 103 E. 8th st., Chattanooga, Tenn.
Jardine, M. L., Springfield, O.
Jarecki Mfg. Co., 953 Liberty st., Pittsburgh, Pa.
Jersey City Patent Water & Gas Pipe Co., Jersey City, N. J.
Johnson, B. & F. J., 71 S. Main st., Waterbury, Conn.
Johnson, J. A., 38 Potter st., Providence, R. I.
Juniata Rolling Mill—McLanahan, Smith & Co., Hollidaysburg, Pa.
Kansas City Asphaltic Iron Pipe Co., Kansas City, Mo.
Keane, Eugene P, 49 Dey st., N. Y.
Kearney, J. & Co., 5th, c. Sycamore st., Cincinnati, O.
Keating, Edward F., 102 John st., N. Y.
Keeler, E. & Co., Williamsport, Pa.
Kegan, Thomas F., Holyoke, Mass.
Keller Mfg. Co., 117 Walker st., N. Y.
Kelly & Jones, 75 John st., N. Y.
Kent, J. A., Brockton, Mass.
Keystone Iron Works (Ltd.), Reading, Pa.
Kilbride, T. F., Holyoke, Mass.
Kilburn, Lincoln & Co., Fall River, Mass.
Kinney Bros., Brockton, Mass.
Kirkup, Wm. & Son, Ludlow st., Cleveland, O.
Kline, M., 400 Central av., Cincinnati, O.
Knapp & Dillon, Masselon, O.
Knight & Jillson, Indianapolis, Ind.
Kranz, F., Sandusky, O.
Kubuly, E. A., Rockville, Conn.
Kutsche, Oswald, 5421 Stewart av., Chicago, Ill.
Langford, J. T., 90 Kilby st., Boston, Mass.
Laumann, J. B., 611 Walnut st., Cincinnati, O.
Lawson, W. & Bro., 38 W. Court st., Cincinnati, O
Leahan, J. P., Calais, Me.
Lee & Phillips, Amherst, Mass.
Leechburg Iron Works, Kirkpatrick & Co. (Ltd.), Leechburg, Pa.
Leroy & Stemin, Zanesville, O.
Lewis, E. J., Birmingham, Conn.
Long, Dennis & Co, 175 La Salle st. (Room 32), Chicago, Ill.; Louisville, Ky.
Longhry, Wm. P., 18 Cliff st., N. Y.
Lorenz, J., Hamilton, O.
Lounsbury, I. W., 691 Chapel st., New Haven, Conn.
Lynn, W. & Co., 143 W. 6th st., Cincinnati, O.
McDonald, A. J., 168 W. Lake st., Chicago, Ill.
McGowan, J. H., 134 W. 2d st., Cincinnati, O.
McGowan Pump Co., 134 W. 2d st., Cincinnati, Ohio.
McKenna, Thos. J., 95 Liberty st., N. Y.
McKeon, F., Jr., Norwalk, Conn.
McLeod, P. R., 100 N. Clinton st., Chicago, Ill.
McMann, T. R. & Bro., 60 Gold st., N. Y.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
McNeal, A. H., Burlington, N. J.
McNeal Pipe & Foundry Co., 52 Wall st., N. Y.
Malleable Iron Fittings Co., Branford, Conn.
Maneely, John, 117-119 N. 4th st., Phila., Pa.
Manning, J. H., 128 W. Pearl st., Cincinnati, Ohio.
Manning & Fitzpatrick, 116 Baker st., Cincinnati, O.
Mansfield & Co. (Ltd.), 57 1st av., Pittsburgh, Pa.
Mathivet, V. P, 352 Superior st., Cleveland, O.
Mellert Foundry & Machine Co. (Ltd.), Reading, Pa.
Meunier & Co., 214 Elm st., Cincinnati, O.
Michigan Pipe Co., Bay City, Mich.
Miller & Ainsworth, Athol, Mass.
Montgomery, Thompson & Co., Youngstown, Ohio.
Moore, F. G., 78 Beekman st., N. Y.
Moore, T. W., 213 Main & 8 Mulberry st., Hartford, Conn.

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Morris, Tasker & Co. (Ltd.), 224 S. 3d st., Phila., Pa.
Morse, J. O., 76 John st., N. Y.
Morton, A. M. & Co., 25 Washington st., Boston, Mass.
Mott, J. L. Iron Works (The), 88-90 Beekman st., N. Y.
Murdock, J. G. & Co., 193 W. 5th st., Cincinnati, O.
Murphy, M. M. & Co., 73 Merwin st., Cleveland, O.
Murphy, R., 134 Sycamore st., Cincinnati, O.
Nason Mfg. Co., 71 Beekman st., N. Y.; Franklin, c. Clay st., Brooklyn, N. Y.
National Foundry & Pipe Works, 605 Smithfield st., Pittsburgh, Pa.
National Pipe Bending Co., New Haven, Conn.
National Tube Works Co., 70 Federal st., Boston, Mass.; Clinton c. Fulton st., Chicago, Ill., 104 John st., N. Y.
Nelsonville Foundry & Machine Co. (The), Nelsonville, O.
Neufarth & McDonald, 209 E. Pearl st., Cincinnati O.
Newman, T. J., 196 W. 7th st., Cincinnati, O.
Nottemeier, A., Pique, O.
O'Brien, J. N., 58 W. 6th st., Cincinnati, O.
Oby & Love, Alliance, O.
Ohio Pipe Co., 95 5th av., Pittsburgh, Pa; ft. Dodge st., Columbus, O.
Oil Well Supply Co. (Ltd.), 91-92 Water st., Pittsburgh, Pa.
Oliver & Howland, Springfield, Mass.
Osgood, G. A., Stoneham, Mass.
Page, J. M. & Co., Naugatuck, Conn.
Pancoast & Maule, 245 S. 3d st., Phila., Pa.
Pancoast & Rogers, 28 Platt st., N. Y.
Parks & Carpenter, Fitchburg, Mass.
Patent Water & Gas Pipe Co., 41 Dey st., N Y.
Patten, J. Mfg. Co., 61 Greenpoint av., Brooklyn., N. Y.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Pawtucket Steam & Gas Pipe Co., Pawtucket, R. I.
Peck Brothers & Co., 70-72 Franklin st., New Haven, Conn.
Pennell, W. H. Co. (The), Portland, Me.
Penna Tube Works, 165 1st av., Pittsburgh, Pa.
Perkins, J. O., Haverhill, Mass.
Perkins Machinery Co., Atlanta, Ga.
Pfaff & Ringwald, Chillicothe, O.
Phillips, G. H., Hamilton, O.
Phillips Mfg. Co., 123 Worthington st., Boston, Mass.
Pitkin Brothers, 152 State st., Hartford, Conn.
Pittsburgh Tube Co., 113 Water st., Pittsburgh, Pa.
Plummer, Chas. M., & H. T. 48 Union st., Portland, Me.
Pollock, Wm. B. & Co., Youngstown, O.
Pottsgrove Iron Works (Potts Bros. Iron Co. Ltd.), Pottstown, Pa.
Price, Wm. G. & Co., 105 Wood st., Pittsb'g, Pa.
Providence Gas & Steam Pipe Co., 135 Eddy st., Providence, R. I.
Providence Steam & Gas Pipe Co., 115 E. Monroe (Room 30), Chicago, Ill.
Providence Steam & Gas Pipe Co., 135 Eddy st., Providence, R. I.
Pyne, W. T., 1036 W. Main st., Louisville, Ky.
Queen City Brass Works, Pearl, c. Plum st., Cincinnati, O.
Ransom, Wm. H., 232 Canal st., N. Y.
Ransom & Wells, 138 Centre st., N. Y.
Rattermann Bros., 577 Elm st., Cincinnati, O.
Reading Foundry Co., Reading, Pa.
Reading Iron Works, 28 Platt st., N. Y.; 18 n. 5th st., Philadelphia, Pa.
Red Jacket Pump Co ,45 W. 2d st., Cincinnati, O
Reenan T., 33 E. 3d st., Cincinnati, O.
Reeves Brothers, Niles, O.
Republic Iron Works (Ltd.), 1st av. & Smithfield st., Pittsburgh, Pa.
Renter & Mallory, 22 Leight st., Balt., Md.
Ricketts, W., 194 Main st., Cincinnati, O.
Riverside Iron Works, Wheeling, W. Va.
Robbins, Gamwell & Co., Pittsfield, Mass.
Robbins, George & Co., Fitchburg, Mass.
Robinson, G., 237 Asylum st., Hartford, Conn
Rockel, A. Zanesville, O.
Rollstone Machine Co., 47 Water st., Fitchburg, Mass.
Roots, P. H. & F. M., Connersville, Ind.
Rumsey, L. M. Mfg. Co., 810 n. 2d st., St. Louis, Mo.
Runkle, W. 160 Broadway, N. Y.
Rundle, Spence & Co., Milwaukee, Wis.
Russel, David, 18 Howard st., Boston, Mass.
Russell, P. W., New London, Conn.
Russell & Co., Dayton, O.
Ryerson, J. T., & Son, 18 Milwaukee ave., Chicago, Ill.
Sawyer, N F, Haverhill, Mass
Sander, J 296 8th ave., Newark. N. J
Sanford Bros., 349 Broad st., Newark, N. J.
Sayre Pipe Foundry, Sayre Pa.
Sayre & Finch, 122 6th ave., Minneapolis, Minn.
Schlemmer, O., 450 Linn st., Cincinnati, O.
Schwabeland, John, 49 Dey st., N. Y.
Scollay, J. A., 74 Myrtle ave., B'klyn, N. Y.
Shaw, Kendall & Co., Toledo, O.
Shepard, R. G., 178 Main st., Brockton, Mass.
Sherriff, J. B., Son & Co., 68 Water st., Pittsburgh, Pa.
Shickle, Harrison & Howard Iron Co., 12 W. Papin st., St. Louis, Mo.
Shields & Brown, 132 Cedar st, N. Y.
Shoats, J. D., Hornellsville, N. Y.
Shulhafer, S., 510 5th st, Louisville, Ky.
Simmons, John, 110 Centre, N. Y.
Smith, Albert, 73 N. J. R. R. ave., Newark, N. J.
Smith, A. P., Lee, Mass.
Smith, E. A., Hamilton, O.
Smith Foundry Co. (The), New Philadelphia, O.
Smith, S. De Catur, Moyer, c. E. York st., Phila., Pa.
Sobers, J., 1121 St. John st., Phila., Pa.
Spang, Chalfant & Co., 69 Sandusky st., Allegheny, Pa.
Stackpole & Lahan, 465 Water st., Bridgeport, Conn.
Standard Mfg. Co., 541 Wood st., Pittsburgh, Pa.
Star Machine Works, Kokomo, Ind.
Star Pipe Co., Elizabethport, N. J.
Steward, D. A., & Co., 24 S. Water st., Cleveland, O. **80.**
Stien, E. T., 113 Mission st., San Francisco, Cal.
Stimson, E. A. & Co., Sears, bet. 2d and 3d sts., Dayton, O.
Story, J., 7th st. c. Freeman ave., Cincinnati, O.
Strubbie, J. E., 547 Freeman ave., Cincinnati, O.
Stults & Mansur, 15 to 21 Oliver st., Boston, Mass.
Sullivan, D., 206 Central ave., Cincinnati, O.
Sumner & Goodwin, 15-21 Oliver st., Boston, Mass.
Sutkamp, H. H., 182 Linn st, Cincinnati, O.
Swampscot Machine Co., South Newmarket, N. H.
Talcott, C. W., Woonsocket, R. I.
Terry, T. P. & Son, Ansonia, Conn.
Trask & Carmichael, 80 Centre st., N. Y.
Tredegar Iron Works, Tredegar Co., Richmond, Va.
Troxell, A. D. & Co., 48 N. 4th st., Phila., Pa.
Tyler Bros., 12-14 Cliff st., N. Y.
Tyler Tube Mill, 8 Oliver st., Boston, Mass.
Union Foundry & Pipe Works, Louisville, Ky.
Union Foundry & Machine Co. (Ltd.), 112 Water st., Pittsburgh, Pa.
U. S. Fire Clay Co. (The), Wilshire Building, Cleveland, O.
Wagner, W. F., 416 Colerain av., Cincinnati, O.
Wainwright Mfg. Co. (The), 93 Liberty st., N. Y.; 65 Oliver st., Boston, Mass.
Waite, J. A., Toledo, O.
Walker, J. L., Hamilton, O.

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Walker, James & Son, 43 Jefferson av., Detroit, Mich.
Walworth Mfg. Co., 14-20 Oliver st., Boston, Mass.
Warden, McClelland & Co., 25 B'way, Cincinnati, O.
Ware & Moodie, Dayton, O.
Warren Foundry & Mach. Co., 160 B'way, N. Y.
Washburn & Garfield, 30 Foster st., Worcester, Mass.
Waters & Garland, 433 W. Main st., Louisville, Ky.
Weber & Donohue, 198 Freeman av., Cincinnati, O.
Wells Rustless Iron Co., 7 Cliff st., N. Y.
Wells, William T., 7 Cliff st., N. Y.
Whetstone & Co., 921 Filbert st., Phila., Pa.
Whitney, A. R. & Co., 17 B'way, N. Y.
Wright, J., Rockland, Me
Wilhelm Bros., 1085 Vine st., Cincinnati, O.
Williams, J. E., Fairmont, Neb.
Willis, R. P. & Son, Springfield, O.
Wilson-Snyder Mfg. Co., 51 Water st., Pittsburgh, Pa.
Windsor, Ira & Co., 122 Dorrance st., Providence, R. I.
Wood, James F. & Co., 133 N. 2d st., Phila, Pa.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Woodman, George & Co., 41-43 Pearl st., Boston, Mass.
Woodman & Warner, 226 Lake st., Chicago, Ill.
Woodruff, Frank H., 28 West st., N. Y.
Worcester Steam & Gas Pipe Works, 193 Front st., Worcester, Mass.
Worswick Mfg. Co., 99-101 Water st., Cleveland, O.
Wyckoff, A. & Son, Elmira, N. Y.
Wyckoff Pipe Co., Williamsport, Pa.
Young, J., Sr. 642 Vine st., Cincinnati, O.
Ziegler, J. A., 38 W. Court st., Cincinnati, O.

Pipes—Tar-Coated.

Cunningham Iron Works Co., 109 Milk st., Boston, Mass,

Pipes—Tin.

Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Roston Lead Mfg. Co., 162 Congress st., Boston, Mass.

Pipes—Tin-Lined, Lead.

Boston Lead Mfg. Co., cor. Congress & Franklin sts., Boston, Mass.
Van Noord n, E., 383 Harrison av, Boston, Mass.

Pipe—Wrought Iron.

Albright's Son & Co, Allentown, Pa.
Allison Mfg. Co., 32d & Walnut sts., Phila., Pa.; 8 Smithfield st., Pittsb'g, Pa.
American Tube & Iron Co., 98 John st., N Y.; 167 1st st., Pittsburgh, Pa.
Atwood & McCaffrey, 50 3d av. Pittsb'gh, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Barr, Edward, 78 John st., N. Y.
Boyle. Thos. G. & Co., 608 Penn av., Pittsburgh, Pa.
Beaman, Dow & Co., 3 to 6 Haymarket sq., Boston, Mass.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Byers, A. M. & Co., Pittsburgh, Pa.
Camden Tool & Tube Works, Camden, N. J.
Chester Pipe & Tube Co., 261 S. 4th st,, Phila., Pa.
Chicago Tubular Well Works, Lake & Clinton sts., Chicago, Ill.
Clow, Jas. B. & Son, 212 Lake st., Chicago, Ill.
Colwell Lead Co., 63 Centre st., N. Y.
Condit, Fuller & Co., Cleveland, O.
Cook & Co., 22 Cortlandt st., N. Y.
Conshohocken Tube Co., Conshohocken, Pa.
Continental Tube Co., Pittsburgh, Pa.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.; 92 Liberty st., N. Y.
Cumberland Nail & Iron Co., Bridgeton, N. J.
Curtis & Co., Cahoes, N. Y.
Davis, Hugh H., 95 5th av., Pittsburgh, Pa.
Davis & Kling, 95 5th av., Pittsburgh, Pa.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.
Duquesne Tube Works Co., 99 Water st., Pittsburgh, Pa.
Eagle Iron Works, Terra Haute, Ind.
Eagle Rolling Mill & Tube Works (J. W. Friend & Co), Pittsburgh, Pa.
Etna Iron Works (Spang, Chalfant & Co.), 66 Sandusky st., Allegheny City, Pa.
Fieldhouse & Dutcher Mfg. Co., 30 W. Monroe st., Chicago, Ill.
Friend, J. W. & Co., Pittsburgh, Pa.
Hardwicke & Ware, Buffalo, N. Y.
Haxtun Steam Heater Co., Kewanee, Ill.
Hoven, James, & Son, Norristown, Pa.
Howard, Childs & Co., 91 5th av., Pittsburgh, Pa.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. 88
Lebanon Mfg. Co., Lebanon, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
McGowan, Jno. H. Co. (The), 134 W. 2d st., Cincinnati, O.
Moore, Robert, 130 1st av., Pittsburgh. Pa.
Morris Machine Works, Baldwinsville, N. Y.
Morris, Tasker & Co., (Ltd.), 222 S. 3d st., Phila., Pa.
Nason Mfg. Co., 71 Beekman st., N. Y.
National Foundry & Pipe Works (Ltd.), 60 Smithfield st., Pittsburgh, Pa.
National Tube Works, 1st av. & Smithfield st., Pittsburgh, Pa.
Oil City Tube Co., Oil City, Pa.
Oil Well Supply Co. (Ltd.), 91 Water st., Pittsburgh, Pa.
Pancoost & Rogers, 28 Platt st., N. Y.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Penna. Tube Works, 165 1st av., Pittsburgh, Pa.
Pittsburgh Tube Co., 113 Water st., Pittsburgh, Pa.
Price, Wm. G. & Co., 15 Wood st., Pittsburgh, Pa.
Reilly, James, 230 West st., N. Y.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Riverside Iron Works, Wheeling, W. Va.
Spang, Chalfant & Co., Pittsburgh, Pa.
Star Steam Heater Co., Market & Main sts., Mt. Joy, N. Y.; 77 Maiden la., N. Y. 57
Swampscot Machine Co., S. Newmarket, N. H.
Syracuse Tube Co., Syracuse, N. Y.
Tyler Tube Mill, Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, M.
Warren Tube Co., Warren, O.
West & Branch, 1417 Main st., Richmond, Va.

Pipe Benders.

National Pipe Bending Co., New Haven, Conn.

Pipe Cutters & Threaders.

Cox & Sons, Philadelphia, Pa.
Curtis & Curtis, Bridgeport, Conn.
Forbes & Curtis, Bridgeport, Conn.
Jorecki Mfg. Co., Erie, Pa.
McCoy & Sanders, 26 Warren st., N. Y.
Pancoast & Maule, Philadelphia, Pa.
Saunder's, D. Sons, 25 Atherton st., Yonkers, N. Y.
Walworth Mfg. Co., 16 Oliver st., Boston, M.

Pipe Joiners.

Watkins, Thos., Johnstown, Pa.

Pipe Tongs.

Anderson, W. H. & Son, 38 Clinton st., Detroit, Mich.
Andrews, W. 100 Steuben st., Jersey City, N. J.
Ashcroft Mfg. Co. (The), Bridgeport, Conn.
Barnes Tool Co., 958 Grand av., New Haven, Conn.

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Bay State Iron Works, Erie, Pa.
Belden, R A. Co. (The), Danbury, Conn.
McCoy & Sanders, 26 Warren st., N. Y.
Noble, Hall & Co., Erie, Pa.
Rochester Pipe Tong Co., Rochester, N. Y.
Smith, H. F., Rochester, N. Y.

Pipe Wrenches.

Jurney, C. H. & Co., 247 Lake st., Chicago, Ill.
McCoy & Sanders, 26 Warren st., N. Y.
Prentiss Vise Co., 23 Dey st., N. Y.

Pistons.

Dickson Mfg. Co., Scranton, Pa.
Phœnix Machine Works, c. 7th & Potter sts., Chester, Pa.
Solid Steel Co (The), Alliance, O.

Piston Heads.

Chester Steel Castings Co., 407 Library st., Phila., Pa.; Chester, Pa. **46**

Piston Rods.

Midvale Steel Co. (The), Nicetown, Phila., Pa.
New Albany Steam Forge Co., New Albany, Ind.
Offutt & Co., Church & Rector sts., N. Y.
Philadelphia Smelting Works, 455 & 457 N. 12th st., Philadelphia, Pa.
Southern Steel Works—John Leighton & Sons—Chattanooga, Tenn.

Pitch.

Carpenter, Geo. B. & Co., 202 S. Water st., Chicago, Ill. **31.**
Childs, Wm. H. H., 73 Maiden la., N. Y.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.

Planers.

Berlin Machine Works (The), Berlin, Wis.
Buss Machine Works, Grand Rapids, Mich. **58.**
Cole Mfg. Co., Lake Village, N. H.
Colladay, Joseph O., 626 Race st., Phila., Pa.
Connell & Dengler, c. Mill & Furnace sts., Rochester, N. Y.
Detrick & Harvey, Creston, c. Jones Falls st., Baltimore, Md.
Egan Co. (The), Cincinnati, O.
Hewes & Phillips Iron Works, Newark, N. J.
Lathe & Morse Tool Co., 130 Gold st., Worcester, Mass.
MacKillar, Smith & Jordan Co., 606-614 Sansom st., Phila., Pa.
Preble Machine Works Co. (The), 38 & 40 W. Monroe st., Chicago, Ill.
Rosback, Fred. P., 224 E. Washington st., Chicago, Ill.
Simons, S. & Co., 13-19 N. Elizabeth st., Chicago, Ill.
Trevor & Co., Lockport, N. Y.

Planers—Boiler Plate.

Swampscot Machine Co., S. Newmarket, N. H.

Planers—Buss.

Baker, Herbert, Foundry & Machine Works, 97 Erie st., Toledo, O.
Buss Machine Works, Grand Rapids, Mich. **58**
Egan Co. (The), Cincinnati, O.
McIvers Bros. & Co., Worcester, Mass.

Planers—Chuck.

Gage Machine Works, Waterford, N. Y.

Planers—Crank.

Belden, R. A. Co. (The), Danbury, Conn.
Bement, Miles & Co., Callowhill & 21st sts., Phila.; 120 B'way, N. Y.

*Planers—Emery.

Tanite Co. (The), Stroudsburg, Pa.

Planers—Iron

Ames Mfg Co., Chicopee, Mass.
Bancroft, W. F. & Co., Lagrange, c. N. & W. R. R., Worcester, Mass.
Belden, R. A. Co. (The), Danbury, Conn.
Bement, Miles & Co., Phila., Pa.; 120 B'way, N. Y.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Fitchburg Machine Works, Fitchburg, Mass.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Kelly, Daniel, 51 N. 7th st., Phila., Pa.
L. W. Pond Machine Co., Worcester, Mass.
Meriden Malleable Iron Co., Meriden, Conn.
New Haven Mfg. Co., New Haven, Conn.
Sellers, Wm. & Co., Phila., Pa.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Tatum, Samuel E. & Co., John, c. Water st., Cincinnati, O.

Planers—Rotary.

Betts Machine Co., Wilmington, Del.
Buss Machine Works, Grand Rapids, Mich. **58**
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60**

Planers—Wood.

Garvin, E. E. & Co., 139-143 Centre st., N. Y.
Hege, C. A., Salem, N. C.
Lombard, Geo. R. & Co., Augusta, Ga.
Power, L. & Co., 20 S. 23d st., Phila., Pa.

Planes.

Appleton, Thomas L., Chelsea, Mass.
Birmingham Plane Mfg. Co., Birmingham, Conn.
Brattleboro Tool Co., Brattleboro, Vt.
Burr, Wm., Blue Rapids, Kansas.
Carter, Edward, Troy, N. Y.
Chapin's, H., Son, Pine Meadow, Conn.
Colton, A. J., 338 N. 4th st., Phila., Pa.
Eclipse Plane Co., Conshocton, O.
Ford & Moslee, Derby, Conn.
Gage Tool Co., Vineland, N. J.
Greenfield Tool Co., Greenfield, Mass.
Harron, John W., 208 Bleecker st., N. Y.
Hoffman, Wm. F., 82 Elizabeth st., N. Y.
Heald, Addison & Son, Milford, N. H.
Holt Mfg. Co., Springfield, Mass.
Kellogg, Wm., Amherst, Mass.
King's, Josiah, Sons, 373 Bowery, N. Y.
Mamebach, Julius, 112 Stanton st., N. Y.
Merritt, Chas., South Scituate, Mass.
Newell, Andrew, 417 W. 41st st., N. Y.
Ohio Tool Co., Columbus, O.
Reed, Edward, Utica, N. Y.
Sandusky Tool, Co. Sandusky, O.
Siegley, Jacob, Wilkes Barre, Pa.
Smith, Otis A., Rockfall, Conn.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Veit, John, 135 Green st., Phila., Pa.

Planes—Adjustable.

Stanley Rule & Level Co., 29 Chambers st., N. Y.
Gage Tool Co., Vineland, N. J.

Planes—Combination.

Stanley Rule & Level Co., 29 Chambers st., N. Y.

Plank—Ship.

Case, W. V., Lumber Co. (Ltd.), 407 Walnut st., Phila., Pa.
Case & Co., 200 B'way, N. Y.
N. Y. Hardwood Lumber Co., 200 B'way, N. Y.

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Planimeters.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Crosby Steam Gauge & Valve Co., 95 and 97 Oliver st., Boston, Mass.

Plates—Machinery.

Carnegie, Phipps & Co. (Ltd.), 48 5th ave., Pittsburgh, Pa.
Robbins, Jno., 58 Kneeland st., Boston, Mass.
Woodman, R., 169 High st., Boston, Mass.

Plating—Gold, Silver and Nickle.

Jones, C. E., & Bro., 55 Longworth st., Cincinnati, O. **78**

Platinum.

Baker & Co., 408 N. J. R. R. ave., Newark, N. J.
Fels, Geo. W., 112 W. 6th st., Cincinnati, O.
Raynor, H. M., 28 Bond st., N. Y.
White, S. S., Dental Mfg. Co., 1260 and 1262 B'way, N. Y.

Pliers.

Barnard, Son & Co., 38 and 40 Worth st., N. Y.
Humason & Beckley Mfg. Co., New Britain, Conn.
King, J. M., & Co., Waterford, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Woodward, F. R., Hill, N. H.

Pliers—Combination.

Billings & Spencer Co. (The), Hartford, Conn.
New England Novelty Works, Hill, N. H.

Pliers—Gas.

Billings & Spencer Co. (The), Hartford, Conn.
Custer Beam Works, Marshall and Diamond sts., Phila., Pa.
Johnson, William, Newark, N. J.

Pliers—Side-Cutting.

Barnard, Son & Co., 78 and 80 Worth st., N. Y.

Plows.

Bradley, David, Mfg. Co., 63 N. Desplaines st., Chicago, Ill.
Breed & Edwards, Pittsburgh, Pa.
Butcher & Gibbs Plow Co., Canton, O.
Chamberlain Plow Co., Dubuque, Iowa.
Claffy, John, 48 Dey st., N. Y. **91**
Collins Co., Collinsville, Conn.
David Bradley Mfg. Co., Chicago, Ill.
Kilbourne & Jacobs Mfg. Co., Columbus, O. **2**
Peru Plow & Wheel Co., Peru, Ill.
Speer, Alex & Sons, Pittsburgh, Pa.
Spratt, Johnston & Co. (Lacock & Darrah), Allegheny, Pa.
Universal Plow Co., Canton, O.

Plugs—Deck, Etc.

Tiebout, W. & J., 16 Chambers st., N. Y.

Plumbago, Graphite & Black Lead.

Dixon, Jos., Crucible Co., Jersey City, N. J.
Obermayer, The S. Foundry Supply Mfg. Co., Cincinnati, O.

Plumber—Ship & Steamship.

Bishop, William, 210 South st., N. Y.

Plush for R'y Seatings.

Goff & Sons, D., Pawtucket, R. I.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Sloane, W. & J., 19th st. & Broadway, N. Y.
Solomon's, B. L. Sons, 16th st. & Union sq., N. Y.

Pointers—Bolt.

Adams & Price Machinery Co., 35-41 Indiana st., Chicago, Ill.

Pointers—Carbon.

Buffalo Electric Works, Buffalo., N. Y.
Cleveland Carbon Co. (The), Cleveland, O.

Pointers—Wire.

Goodnow & Wightman, 176 Washington st., Boston, Mass.
Waterbury Farrell Foundry & Machine Co., Waterbury, Conn.

Poles—Cedar.

Ayer, Edward, 234 S. Water st., Chicago, Ill.
Barker, Cyrus A., 236 S. Water st. (Room 7), Chicago, Ill.
Chicago Cedar Post Co., Ashland av., n. 22d st., Chicago, Ill.
Clark, Fielden & Co., 3 blks. W. of Depot (Oak Park), Chicago, Ill.
Goodnow & Hinds, 240 S. Water st., Chicago, Ill.
Hitchcock & Foster, 232 S. Water (Room 3), Chicago, Ill.
Horn, Wm. H., 238 S. Water st., Chicago, Ill.
Johnson, Jacob, 236 S. Water st. (Room 7), Chicago, Ill.
Mueller, Christy & Raber, 236 S. Water st., Chicago, Ill.
Ripley, Wm. & Son, 238 S. Water st., Chicago, Ill.
Stone, R. B., Lumber Co., 175 Dearborn st. (Room 56), Chicago, Ill.
Whitcomb, R. S. Cedar Co., Robey st., n. Blue Island av., Chicago, Ill.

*Poles—Flag.

Cass Mfg. Co. (The), Lima, O.
Lilly, C. H., William, c. Pearl st., N. Y.
Moulton, C. W. H. & Co., East Cambridge, Mass.

*Poles—Push.

Brownlee & Co., Detroit, Mich.

Poles—Telegraph.

Alger, Smith & Co., 100 Griswold st., Detroit, Mich.
Ayer, Ed. E., 234 S. Water st., Chicago, Ill.
Brownlee & Co., Detroit, Mich.
Chatterton, J. B., E. end Plymouth av. Bridge, Minneapolis, Minn. **54**
Danner, A. C., Mobile, Ala. **69.**
DeCamp & Willson, 88 Cortlandt st., N. Y.
Doyle Bros., 94 Griswold st., Detroit, Mich.
Kaw Valley Lumber Co., 95 B'way, Kansas City, Mo. **16.**
Rathbun Co. (The), Deseronto, Ont.
Stone, B. B., Lumber Co., Coml. Nat. Bank Bldg., Chicago, Ill.

Polish—Metal.

Borsum Bros., 91 Cliff st., N. Y.
Canton Paint & Oil Co., 10 Oliver st., Boston, Mass.
Cleft & Wiese, Bordentown, N. J.
Cline Mfg. Co., 42 & 44 W. Monroe st., Chicago, Ill.
Collery, W. W. & Co., Pittsburgh, Pa.
Electric Glass Co., 1412 Ridge av., Phila., Pa.
Matchless Metal Polish Co., 83 William st., N. Y.; 88 Market st., Chicago, Ill.
Meyers & Co., Emil, 44 Broad st., Boston, Mass.

Polish—Wood.

Bridgeport Wood Finishing Co. New Milford, Conn.
Chicago Wood Finishing Co 143-145 S. Clinton st., Chicago, Ill.

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Cline Mfg. Co., 275 & 279 S. Canal st., Chicago, Ill.
Gould, J. H., Gould & Co., Philadelphia, Pa.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52
Pugh Russell, Stewart Bldg, N. Y.

Porcelain—for Electric Purposes.

Empire China Works, 144 Green st., Greenpoint, N. Y.
Union Porcelain Works, 300 Beckford st., Greenpoint, N. Y.

Porous Cells.

Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Greeley, E. S. & Co , 5 Dey st., N. Y.
Jeffords, J. E. & Co., 2716 Salmon st., Phila., Pa. 46.
New England Pottery Co., 146 Condor st., East Boston, Mass.

Posts—Cedar.

Ayer, Edward E., 234 S. Water st., Chicago, Ill.
Barker, Cyrus A., 236 S. Water st (Room 7), Chicago, Ill.
Chatterton, J. B., E. end Plymouth av. Bridge, Minneapolis, Minn. 54
Chicago Cedar Post Co., Ashland av. n. 22d st , Chicago, Ill.
Clark, Fielden & Co., 3 blks. W. of depot (Oak Park), Chicago, Ill.
Goodenow & Hinds, 240 S. Water st., Chicago, Ill.
Hitchcock & Foster, 232 S. Water st. (Room 3), Chicago, Ill.
Horn, Wm. H., 238 S. Water st., Chicago, Ill.
Johnson, Jacob, 236 S. Water st. (Room 7), Chicago, Ill.
Mueller. Christy & Raber, 236 S. Water st., Chicago, Ill.
Ripley, Wm. & Son, 238 S. Water st., Chicago, Ill.
Stone, R. B., Lumber Co., 175 Dearborn st., (Room 56), Chicago, Ill.
Whitcomb, R. S., Ce ar Co., Robey st., n. Blue Island av., Chicago, Ill.

Posts—Iron.

Buffalo Heating Apparatus Co., 143-151 Perry st., Buffalo, N. Y.
Champion Iron Fence Co., Kenton, O.
Keokuk Wind Engine Co., Keokuk, Iowa.
Kiler Bros., Indianapolis, Ind.
Novelty Iron Works, 3124 Market st., Phila , Pa.
Owen & Chase, 12th, c. Noble st , Phila., Pa.

Powder.

Acme Powder Co., 26 2d st., Pittsburgh, Pa.
Ætna Powder Co., 98 Lake st., Chicago, Ill ; 206 Olive st., St. Louis, Mo. 8.
Alford & Dean, Eldred, Pa.
American Forcite Powder Co., 231 State st., Boston, Mass.; 55 Liberty st., N. Y.
American Mfg. & Supply Co., 12 Dey st., N.Y.; 91 Wabash av., Chicago, Ill.
American Powder Mills, 231 State st , Boston, Mass.; Acton, Mass.; 98 W. Lake st., Chicago, Ill.; 206 Olive st., St. Louis, Mo.
Atlantic Dynamite Co. (The), 245 B'way, N. Y.; 101 S. Main st., St. Louis, Mo.; McCalnsville, N. J.; 3 Smithfield st., Pittsburg, Pa.; 15 Post Office av., Baltimore. Md.; 4 California st., San Francisco, Cal.
Atlantic Powder Co., 11 Central st, Boston, Mass.
Atlas Powder Co., 13 Broad st., Boston, Mass.
Austin Powder Co., 34 S. Water st., Cleveland, O.; Decatur, Ill.
Beury, W. & Co., Shamokin, Pa.
Bidwell, D. W. C. & Co., 143 Water st., Pittsburgh, Pa.
Bisbee, D. H., Camden, Me.
Butts, C. E. & Co., Peoria, Ill.
California Powder Works, 230 California st., San Francisco, Cal,
California Vigorit Powder Co., 327 Pine st., San Francisco, Cal.
Clark, J., 43-44 Olive st., New Haven, Conn.
Climax Fuse Co., 35 B'way, N. Y.
Consumers' Powder Co., Scranton, Pa.
Cressona Powder Works, Pottsville, Pa.
Cushman, S., Deadwood, Dak.
Dittmar Powder Works, 1542 Madison av., N. Y.
Dixie Powder Co., Chattanooga, Tenn.
Dupont, E. J. de N. & Co., 22d, c. Race st., Cincinnati, O.; 37 S. Front st., Phila,. Pa.; 87 Beaver st., N. Y.
Dupont Powder Co., 14 W. Swan st., Buffalo, N. Y.; 7 Central whf., Boston, Mass.; 256 Market st., San Francisco, Cal,
Eggers, S., New Bedford, Mass.
Emmanuel & Co., Catasauqua, Pa.
Excelsior Chemical Works, 414 W. 45th st., N. Y.
Excelsior Powder Co., 3 California st., San Francisco, Cal.
Felhoen Safety Powder Co.. Bound Brook, N. J.
Forcite Powder, 231 State st., Boston, Mass.
German, H. & Co., Allentown, Pa.
Giant Powder Co., 210 Front st., San Francisco, Cal.
Gillespie, Crane & Co., Shamokin, Pa.
Goodyear, G. A., 11 Central st., Boston, Mass.
Granite Powder Co., 328 Montgomery st.. San Francisco, Cal.
Great Western Powder Co., Toledo, O.
Griswold, H. D., 5 Custom House st., Providence, R. I.
Hancock Chemical Co., Hancock, Mich.
Harris, A., 121 Broad st., Providence, R. I.
Hazard Powder Co., 111 Chestnut st., Phila , Pa.; 45 W. 2d st., Cincinnati, O.; 35 Wabash st., Chicago, Ill.; 63 Pine st., N. Y.
Hecla Powder Co. (The), 239 B'way, N. Y.
Hercules Powder Co., 40 Prospect st., Cleveland, O.; Indianapolis, Ind.; 230 California st., San Francisco, Cal. 22.
Hoblizell, W. T., 3 Smithfield st., Pittsburgh, Pa.
Holmes & Keeler, Norwalk, Conn.
Hotchkiss, Z. N., Peoria, Ill.
Howe, W. M., 163 E. 84th st., N. Y.
Howell, W. P., 205 Front st., N. Y.
Hoyle, W. D., 32 Canal st., New Orleans, La.
Hill & Co., L. S., 19 Pearl st., Grand Rapids, Mich.
Ismon & Ayres, Deadwood, Dak.
James, C. E. & Co., Chattanooga, Tenn.
Jenne, C. R., Ft. Wayne, Ind.
Kestner, G. F., 434 Main st., Cincinnati, O.
King's Great Western Powder Co., 358 Jackson st., St. Paul, Minn.
King & Reimer, Rochester, Mich.
Kirk, Arthur & Son, 910 Duquesne way, Pittsburgh, Pa.
Laflin, Boles & Co., Platteville, Wis.
Laflin & Rand Powder Co., 29 Murray st., N. Y.; Pittsburgh, Cincinnati, Philadelphia, St. Louis, Baltimore, Chicago.
Lake Superior Powder Co., Marquette, Mich.
McAbee, E. B., 23 7th st., Pittsburgh, Pa.
Marble, J. C. & Co., Sumner, Me.
Marcellus Powder Co., Syracuse, N. Y.
Metallic Cap Mfg. Co., 35 B'way, N. Y.
Miami Powder Co., Xenia, O.
Miller, Jas. S., Sumneytown, Pa.
Modica & Ennis, 51 Wabash av., Chicago, Ill.
Moormann, J. H., Richmond, Ind.
Moosic Powder Co., Scranton, Pa.
Newton, P. S., 26 Kinzley st., Hartford, Conn.
Ohio Powder Co., Youngstown, O.
Oliver, Paul A., Wilkes-Barre, Pa.
Oriental Powder Mills, 10-12 N. 6th st., Phila., Pa.; 13 Broad st., Boston, Mass.; 71 Wabash st., Chicago, Ill.
Pacific Electric Powder Co., 142 Montgomery st., San Francisco, Cal.
Pennsylvania Powder Co., Scranton, Pa.

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Philip & Wiggs Machinery Co., Birmingham, Ala.
Rand, D. C. & Co., Middletown, Conn.
Rand Drill Co., 23 Park Place, N. Y. 1.
Rand Powder Co., Middlefield, Conn.
Ranlett, D. L., 30 S. Peters st., New Orleans, La.
Rendrock Powder Co., 23 Park Place, N. Y. 1.
Repauno Chemical Co., 305 Walnut st., Phila., Pa.; 239 B'way, N. Y.; 13 Broad st., Boston, Mass.
Rockwell & Moseley, Westfield, Mass.
Rowell, J. E., Southwick, Mass.
Rundy, John A., Carlisle, Pa.
Safety Nitro Powder Co., 430 California st., San Francisco, Cal.
Sampson, Geo. H., 231 State st., Boston, Mass.
Schaghticoke Powder Co., Schaghticoke, N. Y.
Shaffer, W. B., Allentown, O.
Skinner, A. B. & S. W., Keene, N. H.
Small & Schrader, 245 B'way, N. Y.
Smith, Asa, G. W., Reading, Pa
Smith, E. W., 11 Wall st., Bridgeport, Conn.
Standard Explosives Co., 96 B'way, N. Y.
Stevens, F. S. & Co., 315 Main st., Bridgeport, Codn.
Stitt, W., 61 Cedar st., N. Y.
Stump, H. W. & Co., Stouchburg, Pa.
Sycamore Powder Mfg. Co., Nashville, Tenn.
Thornhill, L. C., 56 Gravier st., New Orleans, La.
Thunder Powder Co., 606 Mongtomery st., San Francisco, Cal.
Tonite Powder Co., 218 California st., San Francisco.
Union Powder Co., 40 California st., San Francisco, Cal.
U. S. Dynamite Co., 38 Platt st., N. Y.
Utah Powder Co., 430 California st., San Francisco, Cal.
Vulcan Powder Co., 218 California st., San Francisco, Cal.
Warren Powder Mills, 17 Doane st., Boston, Mass.; Warren, Me.
Weldon, S. A. & Son, Bristol, Conn.
Weldy, H. A. & Co., Tamaqua, Pa.
Wiggs & Bacon Co., Birmingham, Ala.

Preservatives for Iron, Steel & Stone.

Geddes, Son & Co., R. P., Hopekill Road, Glasgow, Scotland.

Presses—Car Wheel

Andrews, Frank H., 545 W. 33d st., N. Y.
Bement, Miles & Co., Callowhill & 21st sts., Phila., Pa., 120 B'way, N. Y.
Brill, J. G. Co., Philadelphia, Pa.
Greeley E. S. & Co. (The), 3 & 7 Dey st., N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Watson & Stillman, 204 E. 43d st., N. Y.

Presses—Drill.

Coe, C. W., Fentonville, Mich.
Crary, C. W. & Son, 35-41 E. Indiana st., Chicago, Ill.
Garvin, E. E. & Co., 139 Centre st., N. Y.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Hewes & Phillips Iron Works, Newark, N. J.
New Haven Mfg. Co., New Haven, Conn.
Oram John S., 155-157 River st., Cleveland, O.
Sebastian, May & Co., 169 W. 2d st., Cincinnati, O.
Stow Flexible Shaft Co. (Ltd.), 2218 Penn av., Phila., Pa. 26.

Presses—Drop.

Beecher & Peck, Lloyd, c. River st., New Haven, Conn.
Crosby, G. A, & Co., 259 Randolph st., Chicago, Ill.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Stiles & Parker Press Co., Middletown, Conn.
Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.
Wheeler, Asa N., 55 Haverhill st., Boston, Mass.

Presses—Hydraulic.

Birmingham Iron Foundry, Birmingham, Conn.
Cardwell, J. W. & Co., Richmond, Va.
Chester Steel Casting Co., 407 Library st., Phila., Pa. 46.
Cleveland Machine Works, Worcester, Mass.
Crews & Westbrook, Danville, Va.
Cushing, N. B., ft. Morris st., Jersey City, N. J.
Dickson Mfg. Co., Scranton, Pa.
Dudgeon, Rich'd, 24 and 26 Columbia st., N. Y.
Farrel Foundry & Machine Co., Ansonia, Conn.
Fould, E., & Eberhardt, 97 N. J. R. R. ave., Newark, N. J.
Granger Foundry & Machine Co., Providence, R. I.
Holyoke Machine Co., Holyoke, Mass.
Kilburn, Lincoln & Co., Fall River, Mass.
Kimplen Hydraulic Press Co., 403 5th ave., Chicago, Ill.
Lowell Machine Shop, Lowell, Mass.
Lyon, E. & Co., 470 Grand st., N. Y.
McGowan Pump Co. (The), 141 and 143 W. 2d st., Cincinnati, O.
Olsen, Tinius & Co., 500 N. 12th st., Phila., Pa.
Phœnix Iron Foundry, c. Elm and Eddy sts., Providence, R. I.
Rawson & Morrison, 27 to 31 Main st., Cambridgeport, Mass.
Robertson, John, & Co., 131 Water st., B'klyn, N. Y.
Taylor, William, & Sons 23 to 39 Adam st., B'klyn, N. Y.
Thorne & Philphard, 42 Water st., N. Y.
Watson & Stillman, 210 E. 43d st., N. Y.
Winsted Foundry & Machine Co. (The), West Winsted, Conn.

Presses—Hydrostatic.

Betts Machine Co., Wilmington, Del.
Niles Tool Works, Hamilton, O.
Schaffer, J. T. & Co., Rochester, N. Y.

Presses—Power and Foot.

Adt, John, & Son, State and Mill River sts., New Haven, Conn.
Birmingham Iron Foundry, Birmingham, Conn.
Blake & Johnson, Waterbury, Conn.
Bliss, E. W. & Co., 17 Adam st., B'klyn, N. Y.
Bushnell, G. H. & Co., 43 to 47 Lagrange st., Worcester, Mass.
Crosby, G. A. & Co., 259 Randolph st., Chicago, Ill.
Eccles, Jas., 2224 Amber st., Phila., Pa.
Ferracute Machine Co., Bridgeton, N. J. 15.
Frech, Wm., 68 W. Monroe st., Chicago, Ill.
Gould, E. & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Merriman, A. H., Meriden, Conn.
Newell, Jos. S. & Co., 302 Federal st., Boston, Mass.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Robbins, F. A., San Francisco, Cal.
Simpson, J. S. & G. F., 26-36 Rodney st., Brooklyn, E. D., N. Y.
Sprowles & Houseman, 218 Arch st, Phila, Pa.
Stiles & Parker Press Co., Middletown, Conn.
Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.
Watson & Stillman, 210 E. 43d st., N. Y.
Williams, White & Co., Moline, Ill.

Presses & Dies.

Bliss, E. W. Co., Brooklyn, N. Y.
Crosby, G. A. & Co., Chicago, Ill.
Ferracute Machine Co., Bridgeton, N. J. 15.
Jensen & Wold, 76 Market st., Chicago, Ill.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Stiles & Parker Press Co., Middletown, Conn.

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Printers—Ticket R. R. & S. S.

American Bank Note Co., 78-86 Trinity Place, N. Y.
Baker, A. R., 28-32 W. Maryland st., Indianapolis, Ind.
Braden, Oliver, 119 S. 4th st., Philadelphia, Pa.
Brown, Martin B., 49 Park Place, N. Y.
Budden & Son, 10 W. Wall st., Atlanta, Ga.
Calvert Lithographing & Engraving Co., (Larned & Shelby), Detroit, Mich.
Cramer, Aikens & Cramer, Milwaukee, Wis.
Crawford, C. G., 49 Park Place, N. Y.
Crosscup & West Engraving Co., 907 Filbert, st., Philadelphia, Pa. **59.**
Denyse, Wm. & Sons, 13 Frankfort st., N. Y.
Earhart & Richardson, 168 Vine st., Cincinnati, O.
Foster, Roe & Crone, 170 Clark st., Chicago, Ill.
Franklin Bank Note Co., 142 Broadway, N. Y. **1.**
Green, Stephen, 27 S. 5th st., Philadelphia, Pa.
Hennig, F. F., Minneapolis, Minn.
Jeffrey Printing Co., 159 Dearborn st., Chicago, Ill.
Jersey City Argus Co., Montgomery st., Jersey City, N.J.
Rockwell & Churchill, 39 Arch st., Boston, Mass. **66.**
Jones, J. M. W., Stationery & Printing Co., 163 to 171 Dearborn st., Chicago, Ill.
Kane Bros., 340 Canal st., N. Y.
Ketcham, Chas. F. & Co., 29 Nassau st., N. Y.
Moss Engraving Co., 535 Pearl st., N. Y. **62.**
Poole Bros., 308 Dearborn st., Chicago, Ill.
Pratt, J. W. & Son, 75 Fulton st., N. Y.
Rand, Avery Supply Co, 67 Federal st., Boston, Mass.
Baird, McNally & Co, 148 Monroe st., Chicago, Ill.
Rankin, John C. Jr., Cortland st., N. Y.
Sherrill, C. L. & Co., 43 Franklin st., Buffalo, N. Y.
Vanden, Houten & Co., 45 Liberty st, N. Y.
Williams Printing Co., 5 Elm st., N. Y.
Winn & Hammond, 102 Congress st,, Detroit, Mich.

Propellers.

Chester Steel Casting Co., 407 Library st., Phila., Pa. **46.**
Dry Dock Engine Works, 48 Orleans st., Detroit, Mich.
Eureka Cast Steel Co., 307 Walnut st., Phila., Pa.
Hodge, Samuel F. & Co., 320 Atwater st., Detroit, Mich.
Nafie & Levy, 26 Beach st., Phila., Pa. **26.**
Webb & Watson, 17 Border st., E. Boston, Mass.

Pulleys.

Appleton Novelty Works, Appleton, Wis.
Armstrong Bros., Springfield, O.
Bartly, Wm., & Sons, Bartley, N. J.
Becker & Newton, Worcester, Mass.
Blevney, John C., 59 7th ave., Newark, N. J.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Broadway Mfg. Co., Broadway, Va.
Brown, A. & F., 44 Park pl., N. Y.
Cannon, F. C., New Haven, Conn.
Chase Turbine Mfg. Co., Orange, Mass.
Corbin, P. & F., New Britain, Conn,
Dill, J. T., 145 to 149 Centre st., N. Y.
Eagan Co. (The), Cincinnati, O.
Eaton & Prurce, 74 and 76 Michigan st., Chicago, Ill.
Ebert, John S., 442 Water st., N. Y.
Ehrsam, Fred. W., 78 Elm st., N. Y.
Ehrsam, J. B., Machine Co., Enterprise, Kan.
Fisher, Chas. S., 1010 N. Main st., St. Louis, Mo.
Fischer Foundry & Machine Co., Pittsb'g, Pa.
Fisher, Thos. & Co., S. 21st & Mary sts., Pittsburgh, Pa.
Franklin Machine Co., Providence, R. I.
Fritsch, Francis, McMicken av., Cincinnati, O.
Gage Machine Works, Waterford, N. Y.
Gould, Robt. S., 332 Broadway, N. Y.
Graves, L. S. & Son, 20 Centre st., Rochester, N. Y.
Haughton & Knlesser, Toledo, O.
Hawkins Machine Co. (The), 49 High st., Boston, Mass.
Herrick, W., Northampton, Mass.
Holmes Gear Works (The), Gardiner, Me.
Holmes & Blanchard, 37 Charlestown st., Boston, Mass.
Holyoke Machine Co., Holyoke, Mass.
Jones & Hitchings, Fore & Cross sts., Portland, Me.
Kinyon Bros., Raritan, N. J.
Lane & Bodley Co. (The), Cincinnati, O.
Lawrence & Chapin, Kalamazoo, Mich.
Link Belt Machinery Co., 11-23 Jefferson st., Chicago, Ill.
Lombard, Geo. R. & Co., Augusta, Ga.
McCaffrey & Smith, Lawrence, Mass.
McMurray, Clarence F., Hartford, Conn.
Medart Patent Pulley Co., St. Louis, Mo.
Mich. Brick & Tile Mach. Works, Morenci, Mich.
Middlebrook Elevator Mfg, Co., Detroit, Mich.
New England Machine Co., 29-33 Haverhill st., Boston, Mass.
Nicholson & Waterman, Providence, R. I.
Novelty Mfg. Co., Depere, Wis.
Noye, John T., Mfg. Co. (The), Buffalo, N. Y.
Ohio Butt Co., 55 Dearborn st., Chicago. Ill.
Oland, S. & Co., Rome, N. Y.
O'Neal & Price Co. (The), 124 W. 2d st., Cincinnati, O.
Ottumwa Iron Works, Ottumwa, Iowa.
Pacific Iron Works, Bridgeport, Conn.
Paige Mfg. Co. (The), Painesville, O.
Palmer Mfg. Co., Troy, N. Y.
Phœnix Iron Foundry, c. Elm & Eddy sts., Providence, R. I.
Power, L. & Co., 20 S. 23d st., Phila., Pa.
Pryibil, P., 461-467 W. 40th st., N. Y.
Ritchie & Dyer Co., Hamilton, O.
Rollstone Iron Foundry, Fitchburg, Mass.
Ross, Charles, Jr., 31-33 S. 5th st., Brooklyn, N. Y.
Sandusky Machine & Agl. Works, Sandusky, Ohio.
Shepard Hardware Co., Buffalo, N. Y.
Sioux City Foundry & Machine Works, Sioux City, Iowa.
Smith, Jas., Woolen Machinery Co. (The), 411-421 Race st., Phila., Pa.
Smith & Egge Mfg. Co. (The), Bridgeport. Conn.
South St. Louis Foundry, c. Stein & Water sts., St. Louis, Mo.
Sprowles & Houseman, 243 Arch st., Phils., Pa.
Stearns, E. C. & Co., Syracuse, N. Y.
Stillwell & Bierce, Dayton, O.
Tatum, Samuel C. & Co., John, c. Water sts., Cincinnati, O.
Tift, Geo. W., Sons & Co., Buffalo, N. Y.
Trenton Lock & Hardware Co., Trenton, N. J.
Walker Mfg. Co., Cleveland, O.
Waters, W. L. & Sons, Nashville, Tenn.
Werum Bros., 48 Summit st., Toledo, O.
Wheeler Foundry Co,, 138 Mechanic st., Worcester, Mass.
Williams, White & Co., Moline, Ill.
Williams & Orton Mfg. Co., Sterling, Ill.
Wood, T. B. & Sons, Chambersburg, Pa.

Pulleys—Differential.

McCoy & Sanders, 26 Warren st., N. Y.

Pulleys—Friction Clutch.

Bates, H. N. & Co., 358 Atlantic av., Boston, Mass.
Blevney, John C., 59-63 7th av., Newark. N. J.
Brown, A. & F., 44 Park Place, N. Y.
Brown & Sharpe Mfg. Co., Providence, R. I.
Dickson Mfg. Co. Scranton, Pa.
Frisbie, D. & Co., New Haven, Conn.
Mason, Volney W., Providence, R. I.
Morris Co., Machine & Iron Co., Dover, N. J.

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New Haven Mfg. Co., New Haven, Conn.
Power Transmitting Machinery, Co. (Brown, A. & F.), 44 Park Place, N. Y.
Wells Bros. & Co., Greenfield, Mass.
Wood, Thos., & Co. 22d and Wood sts., Phila., Pa.

Pulleys—Iron Rim.

Clot & Meese, 129 Fremont st., San Francisco, Cal.

Pulleys—Paper.

American Paper Pulley Co., 114 S. Penn. st., Indianapolis, Ind.
Rockwood, Newcomb & Co., 190 S. Penn. st., Indianapolis, Ind.

Pulleys—Sash.

Chicago Sash Pulley Co. (The), 253 Lake st., Chicago, Ill.
Smith & Egge Mfg. Co., Lafayette, c. Allen st., Bridgeport, Conn.

Pulleys—Self-Adjusting.

Palmer, I. E., Middletown, Conn.

Pulleys—Steel.

Bliss & Tracey, 42 W. Monroe st., Chicago, Ill.
Machine & Steel Pulley Co., 79 S. Penn. st., Indianapolis, Ind.
Noye, John T., Mfg. Co., Buffalo, N. Y.

Pulleys—Wooden.

Cook & Co., 22 Cortlandt st., N. Y.
Dodge Mfg. Co., Mishawaka, Ind.
Oneil & Price Co., 124 W. 2d st., Cincinnati, O.
Scranton Supply & Hardware Co., 131 Wyoming ave., Scranton, Pa.
Taper Sleeve Pulley Works, Erie, Pa.
Wooden Pulley Mfg. Co., River st., c. N. 2d ave., Minneapolis, Minn.
Woodward, W. A., Lowell, Mass.

Pulleys—Wood Split.

Pennington Pulley Works, Fort Wayne, Ind.

*** Pulley Covering.**

National Pulley Covering Co., Baltimore, Md.

Pumps—Air.

Aitchison & Little, 20 W. Centre st., Cleveland, O.
Beseler, Charles, 218 Centre st., N. Y.
Blake, Geo. F., Mfg. Co., 95 to 97 Liberty st., N. Y.
Cameron, A. S., Steam Pump Works (The), ft. E, 23d st., N. Y.
Chambers & Ainslere, 1 Commercial st., Newark, N. J.
Clayton Air Compressor Works, 43 Dey st., N. Y. **9.**
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Delamater Iron Works, ft. W. 13th st., N. Y.
Energy Mfg. Co., 1115 S. 15th st., Phila., Pa. **57.**
Fore River Engine Co., Weymouth, Mass.
Fritsch, Francis, McMicken ave., Cincinnati, O.
Gordon & Maxwell Co. (The), Hamilton, O.
Hawkins & Palmer, 5th, c. Race st., Cincinnati, O.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Meyer, Curt W., 357 4th ave., N. Y.
Sands Bros., 6 Reade st., N. Y.
Shaw & Geary, 53 N. 7th st., Phila., Pa.
Sturtevant, B. T., 115 Purchase st., Boston, Mass.
Worthington, Henry R., 86 & 88 Liberty st., N. Y. **89.**

Pumps—Artesian Well.

Blake, Geo. F. Mfg. Co., 95 & 97 Liberty st., N. Y.
Cook, A. D., Lawrenceburg, Ind.
Gordon & Maxwell Co. (The), Hamilton, O.
Hardwicke & Ware, Buffalo, N. Y.
Knowles' Steam Pump Works, 93 Liberty st., N. Y.
Silver & Denning Mfg. Co., Salem, O.
Yingling, J. A., 15 Public Landing, Cincinnati, O.

Pumps—Boiler Feed.

Ashcroft Mfg Co. (The), Bridgeport, Conn.
Blake, Geo. F. Mfg. Co., 95 & 97 Liberty st., N. Y.
Clayton Air Compressor Works, 43 Dey st., N. Y. **9.**
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Folsom, E. & Co., Exeter, N. H.
Knowles' Steam Pump Works, 93 Liberty st., N. Y.
Lawrence Machine Co., Mason Building, Boston, Mass.
Oran, John S., 155 & 157 River st., Cleveland, O.
Silver & Denning Mfg. Co., Salem, O.
Stewart Heater Co., 37 & 39 Clinton st., Buffalo, N. Y.
Worthington Henry R., 86 & 88 Liberty st., N. Y. **89.**

Pumps—Centrifugal.

Cook & Co., 22 Cortlandt st., N. Y.
Craft, Jesse & Co., 260 Front st., N. Y.
Edwards, Jas. & Co., 412-416 Water st., N. Y.
Lawrence Machine Co., Mason Building, Boston, Mass.
Morris Machine Works, Baldwinsville, N. Y.
Packard. O L., Milwaukee, Wis.
Southwark Foundry & Machine Co., Washington av. & 5th st., Phila., Pa.
Van Wie Irwin, 48 S. West st., Syracuse, N. Y.

Pumps—Diaphragm.

Boston & Lockport Block Co., 162 Commercial st., Boston, Mass. **90.**

Pumps—Elevator.

Blake, George F. Mfg. Co., 95-97 Liberty st., N. Y.
Davidson Steam Pump Co., 77 Liberty st., N. Y. **11.**
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Pumps—Fire.

Blake, Geo. F. Mfg. Co., 95-97 Liberty st., N.Y.
Clark Machine Co., Turner's Falls, Mass.
Clark, William & Co., Pittsfield, Mass.
Cowing & Gleason Mfg. Co., Seneca Falls, N. Y.
Davidson Steam Pump Co., 77 Liberty, N. Y. **11.**
Holyoke Machine Co., Holyoke, Mass.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Russell, A. & Sons, Newburyport, Mass.
Silsby Mfg. Co. (The), Seneca Falls, N.Y.
Worthington, Henry R., 86-88 Liberty st., N.Y. **89.**

Pumps—Force.

Balzley, John, 513-521 Penn. st., Phila., Pa.
Blake, George F., Mfg. Co., 95 Liberty st., N.Y.
Cameron, A. S., Steam Pump Works, 433 E. 23d st., N. Y.
Comstock & Coonse, Indianapolis, Ind.
Cooper, Dyer, 1216 Market st., Phila., Pa.
Corcoran, Andrew J., 76 John st., N. Y.
Craft, Jesse & Co., 260 Front st., N. Y.
Davidson Steam Pump Co., 77 Liberty st., N. Y. **11.**
Deane Steam Pump Co., 92 Liberty st., N. Y.

The numbers following names indicate page on which the firm advertises.

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Delamater, C. H. & Co., ft. W. 13th st., N. Y.
Douglas, W. & R., 85 John st., N. Y., Middletown, Conn.
Eberle, G. A., 32 Hawley st., Boston, Mass.
Economic Boiler & Tank Feed Pump, 91 Liberty st., N. Y.
Economic Gas Engine Co., 34 Dey st., N. Y.
Empire Steam Pump Co., 12 Cortlandt st., N. Y.
Field Force Pump Co., Lockport, N. Y.
Gordon & Maxwell Co., 96 Liberty st., N. N.
Gould's Mfg. Co., 60 Barclay st., N. Y.
Guild & Garrison, Brooklyn, N. Y.
Hall Steam Pump Co., 91 Liberty st., N. Y.
Hanson, Thos., 114 Centre st., N. Y.
Hardwicke & Ware, Buffalo, N. Y.
Hickman Hose Coupling Co., 145 Elm st., N. Y.
Holly Mfg. Co., 45 Broadway, N. Y.
Hood, William J., Valley Falls, R. I.
Howe Pump & Engine Co. (The), 82 S. Penn av., Indianapolis, Ind.
Huber, Henry & Co., 81 Beekman, N. Y
Hydro Pneumatic Pump Co., 324 9th av., N. Y.
Johnston, William M., Wilmot, O.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Lawrence Machine Co., Mason Building, Boston, Mass.
Lewis, P. C. Mfg. Co., Catskill, N. Y.
Mast, Foos & Co., Springfield, O.
Morrison, David, 55 W. 10th st., N. Y.
Myers, F. E. & Bro., Ashland, O.
Niagara Mfg. Co., Decatur, Ill.
Ohio Force Pump Mfg. Co. (The), Canton, O.
Perkins, Wind Mill & Axe Co., Mishawaka, Ind.
Place Gas Engine Mfg. Co., 145 Elm st., N. Y.
Pulsometer Steam Pump Co., 83 John st., N. Y.
Reilly, James, 230 West st., N. Y.
Reynolds, M. & Co., 25 Centre, N. Y.
Rider Engine Co., 37 Dey st., N. Y.
Rumsey & Co. (Ltd.), 19 Dey st. N. Y.
Sands Bros., 6 Reade st., N. Y.
Sayer & Co., 37 Dey st., N. Y.
Shipman Engine Co., 92 Pearl st., Boston, Mass.
Ship Suction Valve Mfg. Co., 86 Duane st., N. Y.
Silsby Mfg. Co., 51 John st., N. Y.
Silver & Dennig Mfg. Co., Salem, O.
Smith, Fernando B., Canton, O.
Spiers, Alex., North Windham, Me.
Standard Pump Mfg. Co., 143 Elm st., N. Y.
Stewart Heater Co., Buffalo, N. Y
Union Mfg. Co., 103 Chambers st., N. Y.
U. S. Supply Co. (Ltd.), 51 John st., N. Y.
Welch & Lawson, 205 Centre st., N. Y.
Winterbauer, Louis, 158 Canal st., N. Y.
Woodward Steam Pump Co., 10 Reade st., N. Y.
Worthington, Henry R., 86 Liberty st., N. Y. **89.**

Pumps—Hydraulic.

Birmingham Iron Foundry, Birmingham, Conn.
Blake, Geo. F., Mfg. Co., 95-97 Liberty st., N. Y.
Caldwell, J. W. & Co., Richmond, Va.
Cleveland Machine Works, Worcester, Mass.
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Dickson Mfg. Co., Scranton, Pa.
Dudgeon, Richard, 24 Columbia st., N. Y.
Holyoke Machine Co., Holyoke, Mass.
Hoppe, Paul F., 107 Liberty st., N. Y.
Kimplen Hydraulic Press Co., 403 5th av., Chicago, Ill.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Lowell Machine Shop, Lowell, Mass.
McGowan Pump Co. (The), 141-145 W. 2d st., Cincinnati, O.
Shaw, Thomas, 915 Ridge av., Phila., Pa
Shepard Mfg. Co. (The), Union City, Conn.
Watson & Stillman, 210 E. 43d st., N. Y.
Winsted Foundry & Machine Co. (The), West Winsted, Conn.
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Pumps—Marine.

Bishop, Wm., 210 South st., N. Y.
Blake, Geo. F., Mfg. Co., 95-97 Liberty st., N. Y
Boston & Lockport Block Co., Boston, Mass. **90**
Evans, C. H., 110 Beale st., San Francisco, Cal.
Farm & Marine Pump Co., 5 Fort E. st., Detroit, Mich.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Russell, A., & Sons, Newburyport, Mass
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Pumps—Mining.

Clayton Air Compressor Works, 42 Ivy st., N. Y. **9**
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Gordon & Maxwell Co. (The), Hamilton, O.
Gudil & Garrison, Brooklyn, N. Y.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Pumping Machinery.

Canton Steam Pump Co., Canton, O.
Dean Bros., Steam Pump Co., Indianapolis, Ind.
Fraser & Chalmers, Union & Fulton sts., Chicago, Ill.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Goulds Mfg. Co., 60 Barclay st., N. Y.
Laidlaw & Dunn Co., Cincinnati, O.
Lawrence Machine Co., Mason Bldg., Boston, Mass.
Valley Pump Works, Easthampton, Mass.

Pumps—R. R.

Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Dean Bros., Steam Pump Works, Indianapolis, Ind.
Gordon & Maxwell (The), Hamilton, O.
McGowan Co., John H., Cincinnati, O.
Pulsometer Steam Pump Co., 83 John st., N. Y.
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Pumps—Rotary.

Benoit, J. P., 253 Croghan st., Detroit, Mich.

Pumps—Steam.

Abbott, W. S., 132 N. 3d st., Philadelphia, Pa.
Acme Steam Pumps, 144 N. 3d st., Phila., Pa.
Aller, A., 109 Liberty st., N. Y.
Allis, Edward & Co., Milwaukee, Wis.
Andres, H., 22 N. 4th st., Phila., Pa.
Atwood & McCaffrey, 60 3d av., Pittsb'g, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Balzley, J., 522 S. Delaware av., Phila., Pa.
Baker, Bross & Co., Madison st., Wis.
Baker & Smith Co., 81-83 E. Jackson st., Chicago, Ill.
Belfield, H. & Co., 435 N. Broad st., Phila., Pa.
Best, John & Son, 333 E. Fulton st., Lancaster, Pa.
Blake Mfg. Co. (The), (Geo. F.), 95 Liberty st., N. Y.; 44 Washington st., Boston, Mass.
Blakeslee Mfg. Co., 69 Washn. st., Du Quoin, Ill.
Blakeney Foundry Co., Springfield, O.
Bickerton, T. B. & Co., 12 S. 4th st., Phila., Pa.
Bourbon Copper & Brass Works, 198 E. Front st., Cincinnati, O.
Bowman, Kendrick & Co., 43 S. 4th st., Phila., Pa.
Boyts, Porter & Co., Connellsville, Pa.
Braman, Dow & Co., 3 Haymarket sq., Boston, Mass.
Brooks, S. H., West Randolph, Vt.

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Brown & King, 62 S. Broad st., Atlanta, Ga.
Burton, C. H., Main, c. Centre st., Cleveland, O.
Cadman, A. W. & Co., 63 Water st., Pittsburgh, Pa.,
Cameron, A. S., Steam Pump Works, ft. E. 23d st., N. Y.
Canton Steam Pump Co., Canton, O.
Cary Steam Pump Co. (The), 90 Chambers st., N. Y.
Challenge Wind Mill & Feed Mill Co., Batavia, Ill.
Clapp, Geo. M. & Son, 46 Cortlandt st., N. Y.
Clark Machine Co., Turner's Falls, Mass.
Clark, W. & Co., Pittsfield, Mass.
Clay, J. H., 1320 Ridge ave., Phila., Pa.
Clayton Air Compressor Works, 43 Dey st., N. Y. 9.
Clayton Steam Pump Works, 45 and 47 York st., B'klyn, N. Y.
Clow, Jas. B., 212 Lake st., Chicago, Ill.
Coleman, I. B., Elmira, N. Y.
Collingnon, Frank, c. Perry and Washington sts., Buffalo, N. Y.
Columbus Machine Co., Columbus, O.
Colwell Lead Co., 63 Centre st., N. Y.
Cook, A. D., Lawrenceburg, Ind.
Cook & Chick, 260 Michigan st., Chicago, Ill.
Cooke & Co., 22 Cortlandt st., N. Y.
Comstock & Coonse, Indianapolis, Ind.
Crane Bros. Mfg. Co., 10 Jefferson st., Chicago, Ill.
Crosby Steam Gauge & Valve Co., 95 and 97 Oliver st., Boston, Mass.
Crawford & McCrummond, Brazil, Ind.
Crown Iron Works, 113 2d ave., S. E., Minneapolis, Minn.
Dauphin, Wm., 40 Cortlandt st, N. Y.
Davis, Isaac B., & Son, Hartford, Conn.
Davidson Steam Pump Co., 77 Liberty st., N. Y.; 51 Oliver st., Boston, Mass.; 41 Keap st., B'klyn, N. Y. 11.
Davidson's, M. T., 51 N. 7th st., Phila., Pa.
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Deane Steam Pump Co., 92 Liberty st., N. Y.; 615 N. Main st., St. Louis, Mo.; 49 N. 7th st., Phila., Pa.; 54 Oliver st., Boston, Mass.; Holyoke, Mass.; 226 to 238 Lake st., Chicago, Ill.
Delamater, C. H. & Co., 21 Cortlandt st., N. Y.
Delamater, C. H. & Co., ft. W. 13th st., N. Y.
Detroit Metal & Heating Works, 54 Woodward ave., Detroit, Mich.
Dickson Mfg. Co. 96 Lake st., Chicago, Ill.; 12 Liberty st., N. Y.
Donegan & Swift, 174 Fulton st., N. Y.
Douglas, W. & B., Middletown, Conn.
Dow Steam Pump Works, San Francisco, Cal.
Eagle Iron Works, Terre Haute, Ind.
Eclipse Pump Mfg. Co., 170 Plum st., Cincinnati, O.
Economic Boiler & Tank Feed Pump, 91 Liberty st., N. Y.
Edwards, Jos. & Co., 412 Water st., N. Y.
Empire Steam Pump Co., 12 Cortlandt st., N. Y.
Empire Steam Pump Mfg. Co., Carthage, N. Y.
Epping, Carpenter & Co., 882 Penn av., Pittsburgh, Pa.
Evans, C. H., 110 Beale st., San Francisco, Cal.
Exeter Machine Works, Exeter, N. H.
Fairbanks, Morse & Co., Lake & La Salle sts., Chicago, Ill.
Fairbanks & Co., 26 S. Meriden st., Indianapolis, Ind.
Farrel Foundry & Machine Co., Ansonia, Conn.
Fewlass, G., 118 E. 2d st., Cincinnati, O.
Fore River Engine Co., Weymouth, Mass.
Forsaith, S. C. & Co., Manchester, N. H.
Foster, William, 13 Adams st., Brooklyn, N. Y.
Fox, I. W., Rochester, Minn.
Epping, Carpenter & Co. (Ltd.), 2410 Penn av., Pittsburgh, Pa.
Fraser & Chalmers, Fulton & Union sts., Chicago, Ill.
Fritz, Geo. J., 2018 S. 3d st., St. Louis, Mo.
Fuller, Dana & Fitz, 110 North st., Boston, Mass.
Fulton & Co., 91 1st av., Pittsburgh, Pa.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
George, E. & Co., 82 South st., N. Y.
Gordon, Strobel & Laureau (Ltd.), 708 Penn av., Pittsburgh, Pa.
Gordon & Maxwell Co., 96 Liberty st., N. Y., 96 Lake st., Chicago, Ill.; 705 Arch st., Phila., Pa.; 811 N. 2d st., St. Louis, Mo., Hamilton, O.
Goss & Dow, 114 Beale st., San Francisco, Cal.
Gould's Mfg. Co., 60 Barclay st., N. Y.; Seneca Falls, N. Y.
Greenfield, W. G. & G., 5th, c. Cross st., East Newark, N. J.
Green, William H., 34 S. 2d st., Phila., Pa.
Grummond, S. B. (dock bet. 1st & Cass st.), Detroit, Mich.
Guild & Garrison, Kent av., c. S. 10th st., E. D., Brooklyn, N. Y.
Hall Steam Pump Co., 91 Liberty st., N. Y.
Hall Steam Pump Co., 267 S. 4th st., Phila., Pa.
Hall, M. S., Ypsilanti, Mich.
Hamlin Pump Co., 21 Union st., Hartford, Conn.
Hamon, Gibbs & Co., Corry, Pa.
Hancock Inspirator Co., 33 India whf., Boston, Mass.
Hanson, Thos., 174 Centre st., N. Y.
Hardick, Chas. B., 120 Plymouth st., Brooklyn, N. Y.
Hardick, W. S., 118 Plymouth av., Brooklyn, N. Y.
Hardwicke & Ware, Buffalo, N. Y.
Harmer Foundry & Machine Works, Harmar, Ohio.
Harvey, A. & Son, 139 Woodbridge av., Detroit, Mich.
Hastings Steam Pump Co., 114 Front st., Brooklyn, N. Y.
Hazleton Iron Works. Hazleton, Pa.
Heald & Morris, Baldwinsville, N. Y.
Hewes & Phillips Iron Works, Orange, c. Ogden sts., Newark, N. J.
Hodge, Samuel F. & Co., 320 Atwater st., Detroit, Mich.
Holly Mfg. Co., Lockport, N. Y.; 45 B'way, N. Y.
Holt, Geo. F., 77 Haverhill st., Boston, Mass.
Holyoke Machine Co., Holyoke, Mass.
Hooker-Colville Steam Pump Co., 35 S. Canal st., Chicago, Ill.; St. Louis, Mo.
Hoppe, Paul F., 107 Liberty st., N. Y.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Hubbard, Norman, 93 Pearl st., Brooklyn, N. Y.
Huetteman, F. & Co., 12 Sherman st., Detroit, Mich.
Hughes Bros., Elm & Washington sts., Cleveland, O.
Humphreys Mfg. Co. (The), Mansfield, O.
Hydraulic Mfg. Co., 71 W. Broad st., Columbus, O.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.
Iowa Iron Works, Dubuque, Iowa.
I. X. L. Pump Co. (The), Goshen, Ind.
Jarecki Mfg. Co. Erie, Pa.
Jarvis Engineering Co., 61 Oliver st., Boston, Mass.
Kane, Thos & Co., 137 Wabash ave., Chicago, Ill. 28-29.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Keefer, Horace A. & Co., 54 Sheildley Bldg., Kansas City, Mo. 88.
Kelly, Daniel, 51 N. 7th st., Phila., Pa.
Kerrick, J. H., 2d ave. N. & 5th st., Minneapolis, Minn.
Kirkup, Wm. & Son, S. E. c. Pearl and Ludlow sts., Cincinnati, O.
Knowles Steam Pump Works, 93 Liberty st., N. Y.; 111 Federal st., Boston, Mass.
Knowlson & Kelley, 78 River st., Troy, N. Y.
Laidlaw & Dunn Co., Cincinnati, O.

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Landis, Ezra F., 537 N. Cherry st., Lancaster, Pa.
Lang, W. H., Goodhue & Co., Burlington, Vt.
Lawrence Machine Co., 17 Cortlandt st., N.Y ; 70 Kilby st., Boston, Mass.
Leeds, C. S. & Co., 221 Hennepin ave , Minneapolis, Minn.
Leroy, J., Pine Co. (The), 550 to 554 Fulton st., Troy, N. Y.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **iii.**
Lockyear, G. H., Minneapolis, Minn.
Lord, Bowler & Co., 33 Centre st., Cleveland, Ohio.
Lovegrove & Co., 143 N. 3d st., Phila., Pa.
McCormick, J. A., 150 1st ave., Pittsburgh, Pa.
McGowan, John H. Co., 46 Central ave., Cincinnati, O.
McLaren, James, 47-49 Liberty st., Albany, N. Y.
McLaughlin, Geo. G. Mfg. Co., 49 Haverhill st., Boston, Mass.
Manning, J. H., 128 W. Pearl st., Cincinnati, O.
Marsh, Jas. P. & Co., 224 Washington st., Chicago, Ill.
Middlebrook Elevator Mfg. Co., 110 ... Larned st., Detroit, Mich.
Miller Co. (The), Crestline, O.
Miller Mfg. Co., Canton, O.
Milwaukee Steam Engine Works, Milwaukee, Wis.
Morgan, E. S., Mystic Bridge, Conn.
Morris Machine Works, Baldwinsville, N. Y.
Morrison, S. P. & Co., Mankato, Minn.
Morton, A. M. & Co., 25 Washington st., Boston, Mass.
Moseley, Jerome S , 33 W. Onondaga st., Syracuse, N. Y.
Murphy, M. M. & Co., 73 Merwin st., Cleveland, O.
Murray Iron Works Co., Burlington, Iowa.
Myers, F. E. & Bro., Ashland, O.
National Iron Works, New Brunswick, N. J.
National Iron & Brass Works, Dubuque, Iowa.
National Water Works Construction Co., Dayton, O.
Nesbit & Van Wie, Syracuse, N. Y.
Niagara Steam Pump Works, 118 Plymouth st., Brooklyn, N. Y.
Nightingale, S. C. & Childs, 134 Pearl st., Boston, Mass.
Norwalk Iron Works Co. (The), Water st., South Norwalk, Conn.
Noteman Rotary Engine & Pump Co , Toledo, Ohio.
Nye Steam Vacuum Pump Co., 75 W. Washington st., Chicago, Ill.
Ohl, G. A. & Co., 25 James st., Newark, N. J.
Packard, O. L., Milwaukee, Wis.
Parke & Lacy, 8 California st., San Francisco, Cal.
Payne, B. W. & Sons, 10 S. Canal st., Chicago, Ill.
Peoria Pump Co. (The), Peoria, Ill.
Perkins Machine Co., Atlanta, Ga.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Pine, J. Leroy Co. (The), 550-554 Fulton st., Troy, N. Y.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Pollock, Alex., 212 West st , N. Y. **32**
Pond Engineering Co , 707 Market st., St. Louis, & Kansas City, Mo.
Post, John, Jr. & Co., 70 Kilby st., Boston, Mass.
Pratt, L. H., 15 S. Water st., Cleveland, O.
Pulling, James G. & Co., 71-73 Broad st., Columbus, O.
Pulsometer Steam Pump Co., 83 John st., N. Y.
Reed, J. G., 216 N. 3d st., Philadelphia, Pa.
Rees, Shook & Co., Water & Short sts., Pittsburgh, Pa.
Riker, C. L., 36 Columbia Hgts. B'klyn, N. Y.
Roberts, G. J. & Co., Dayton, O.
Rochester Machinery Mfg. Co., 34 W. Monroe st , Chicago, Ill.
Rodgers Iron Mfg Co., Muskegon, Mich.
Rumsey & Co. (Ltd.), Seneca Falls, N. Y.
Russell, A. & Sons, Newburyport, Mass.
Russell, Boynton & Co., 210 3d st. S., Minneapolis, Minn.
Sands Bros., 6 Reade st., N. Y.
Sayer & Co., 37 Dey st., N. Y.
Sayre & Finch, 122 6th av., Minneapolis, Minn.
Schleicher, Schumm & Co., Phila, Pa.; Chicago, Ill.
Scofield, Louis, Jr., 118 W. Congress st., Detroit, Mich.
Seigfried & Eby, Franklin, O.
Shaw, Thos., 916 Ridge av., Phila., Pa
Shepard Mfg. Co. (The), Union City, Conn.
Sheriff, J. B., Son & Co., 68 Water st., Pittsburgh, Pa.
Shultz, M., 168 Plum st., Cincinnati, O.
Siegfried & Eby, Franklin, O.
Silsby Mfg. Co , Seneca Falls, N. Y.; 51 John st., N. Y.
Silver & Deming Mfg. Co., Salem, O.
Smith, H. B. Machine Co., 925 Market st., Phila., Pa.
Smith-Vaile Co. (The), Dayton, O.
Snell, Henry I., 135 N. 3d st., Phila., Pa.
Southwork Foundry & Machine Co., Washington av. & 5th st., Phila., Pa.
Standard Iron Co., S. 4th st. & 9th av., Minneapolis, Minn.
Tebo, Wm. M., 23 South st., N. Y.
Tompkins, D. A. & Co., Charlotte, N. C.
Thompson & Campbell, 1030 Germantown av., Phila., Pa.
Thomson & Co., 617 Madison av., N. Y.
Union Mfg. Co., 103 Chambers st., N. Y.
Union Mfg. Co., New Britain, Conn.
United States Pump & Valve Co., 26 & 28 Oliver st., Boston, Mass.
Valley Machine Co., East Hampton, Mass.
Van Duzen & Tift, 102 & 104 E. 2d st., Cincinnati, O. **57.**
Van Wye, Irvin, 48 S. West st., Syracuse, N. Y.
Variety Iron Works, Minneapolis, Minn.
Volker & Felthousen Mfg. Co., 46 Mechanic st., Buffalo, N. Y.
Vulcan Iron Works, Wilkesbarre, Pa.
Webster, Camp & Lane Machine Co., Akron, Ohio.
Weight, H. & Co., New Lisbon, O.
Weinman's Steam Pump Works, Columbus, Ohio.
Wells, F. C., 116 S. Clinton st., Chicago, Ill.
Westinghouse Machine Co., Pittsburgh, Pa. **vi.-vii.**
Wheeler & Tappan, 88 W. Lake st., Chicago, Ill.
Wilbraham Bros., 2320 Fkd. av., Phila., Pa.
Wilson-Snyder Mfg. Co., 51 Water st., Pittsburgh, Pa.
Winebreuer, T. E., 110 N. 4th st., Phila., Pa.
Wachs, E. H., La Salle av. c. Indiana st., Chicago, Ill.
Walker, James & Son, 43 Jefferson av., Detroit, Mich.
Walworth Construction & Supply Co., 134 Congress st., Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Warden, McClelland & Co., 25 B'way, Cincinnati, O.
Watson & Stillman, 204 E. 43d st., N. Y.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Woodward, M. A., 83 Centre st., N Y.
Woodward Steam Pump Co. (The), 10 Reade st., N. Y.
Worthington, Henry R., 88 Liberty st., N. Y.; Boston, Phila., Chicago, St. Louis, and San Francisco. **89.**
Wychoff, A. & Son, Elmira, N. Y.
Yingling, J. A., 15 Public Landing, Cincinnati, O.
York Mfg. Co., York, Pa.
Young & Locke, Titusville, Pa.

***Pumps—Tank.**

Davidson Steam Pump Co., 77 Liberty st., N.Y. **ii.**

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Pumps—Vacuum.

Aller, A., 109 Liberty st., N. Y.
Blake, Geo F., Mfg. Co., 95-97 Liberty st., N.Y.
Clayton Air Compressor Works, 43 Dey st., N. Y. 9
Colwell Iron Works, 27th st. & N. River, N. Y.
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. 11.
Guild & Garrison, Kent av. c. S. 10th st., Brooklyn, N. Y.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Worthington, Henry R., 86-88 Liberty st., N.Y. 89.

Pumps—Vertical.

Knowles Steam Pump Works, 93 Liberty st., N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Worthington, Henry R., 86 and 88 Liberty st., N. Y. 89.

*Punches—Boiler.

Harrisburg Steam Boiler Works, Harrisburg, Pa.

*Punches—Car Seal.

Jones Stationery & Printing Co. (J. M. W.), Dearborn and Monroe sts., Chicago, Ill.

Punches—Center.

Elmwood Tool Co., c. Harrison & Spruce sts., Providence, R. I.
Goodnow & Wightman, 176 Washington st., Boston, Mass.

*Punches—Check.

Bemis & Call, Hardware & Tool Co., Springfield, Mass.

Punching Machinery.

Bement, Miles & Co., Phila., Pa.
Birmingham Iron Foundry, Birmingham, Conn.
Buffalo Forge Co., Buffalo, N. Y.
Burk, P. F., 360 Dorchester av., South Boston, Mass.
Capital City Machine Works, Spring & Water sts., Columbus, Ohio.
Cashore, Thos., 242 South st., N. Y.
Conqueror Punch & Shear Co., 32 Liberty st., N. Y.
Dudgeon, Richard, 24 Columbia st., N. Y.
Ferracute Machine Co., Brighton, N. J. 15
Freche, Wm., 68 W. Monroe st., Chicago, Ill.
Hampel, Otto, 143 Elm st., N. Y.
Heartley, George W., Toledo, O.
Howard, Geo. C., 19 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Langenau Mfg. Co., 156 Merwin st., Cleveland, Ohio.
Long & Allstatter Co., Hamilton, O.
Lyon, E. & Co., 470 Grand st., N. Y.
McCoy & Sanders, 26 Warren st., N. Y.
Merriman, A. H., Meriden, Conn.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Old Colony Rivet Co., Kingston, Mass.
Pollock, Alex., 212 West st., N. Y. 32.
Pusey & Jones Co., Wilmington, Del.
R'y Register Mfg. Co., 1193 Broadway, N. Y. 73.
Robinson Rea Mfg. Co. (The), 134 Water st., Pittsburgh, Pa.
Sellers & Co., Wm., Phila., Pa.
Stiles & Parker Press Co. (The), Middletown, Conn.
Taft, Geo. C., 34 Southbridge st., Worcester, Mass.
Tubular, Barrow & Machine Co., 169 14th st., Jersey City, N. J. 32.
Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.
Watson & Stillman, 210 E. 43d st., N. Y.
Wheeler, Asa W., 85 Haverhill st., Boston, Mass.
Whitcomb Mfg. Co., Worcester, Mass.
Williams, White & Co., Moline, Ill.
Wilson, J. Fred., 23 Herman st., Worcester, Mass.

Purifiers—Water.

Albany Steam Trap Co., Albany, N. Y.
Delaney, H. J. & Co., Milwaukee, Wis.
Foubert Mfg. Co., 18 Cortlandt st., N. Y.

Pyrometers.

Brown, Edward, 311 Walworth st., Phila., Pa.

Purchase & Sale—R. R. Property.

Dunham, Sumner T., 45 Broadway, N. Y.
Skeele, Frank H., 45 Broadway, N. Y.

Radiators—Steam for R. R. Cars & Steamboats.

Detroit Steam Radiator Co., Lincoln av., Detroit, Mich.
Griffing, A. A., Iron Co., 449 Communipaw av., Jersey City, N. J. 78.
National Pipe Bending Co (The), 102 River st., New Haven, Conn.
Shackleton Car Heating and Ventilating Co., 115 Broadway, N. Y. 85.

Radiators—Steam & Hot Water.

Brown, Owens & Taylor, 12th & Buttonwood sts., Phila., Pa.
Buffalo Heating Apparatus Co., 143-151 Perry st., Buffalo, N. Y.
Clow, James B. & Son, 214 Lake st., Chicago, Ill.
Detroit Steam Radiator Co., 129 Griswold st., Detroit, Mich.
Eureka Steam Heating Co., 302 State st., Rochester, N. Y.
Globe Steam Heater Co., North Wales, Pa.
Griffing Iron Co., A. A., 449 Communipaw av., Jersey City, N. J. 78.
Haverhill Iron Works, Haverhill, Mass.
Haxtun Steam Heater Co., Kewanee, Ill.
Hay & Prentice Co., 127 S. Clinton st., Chicago, Ill.
Nason Mfg. Co., 71 Beekman st., N. Y.
Paul, Geo. K. & Co., 98 Milk st., Boston, Mass.
Radiator Mfg. Co, Providence, R. I.
Reed, J. H. Co. (The), 137 Centre st, N. Y.
Reed, J. H. & Co., Lima, O.
Smith, H. B. & Co., Westfield, Mass.
Stearns, E. C. & Co., Syracuse, N. Y.
Wainright Mfg. Co, 65 Oliver st., Boston, Mass.; 93 Liberty st., N. Y.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Wood, Wm. E. Co., 296 W. Baltimore st., Baltimore, Md.

Rail Braces.

Ajax Forge Co., Chicago, Ill.
Weir Frog Co., Front and Water sts., Cincinnatti, O. 47.

Rail Chairs.

Barnum, Richardson & Co., Salisbury, Conn.
Johnson Steel Street Rail Co. (The), Johnstown, Pa.; 72 Mut. Life Bldg, N. Y.; 6 Oliver st., Boston, Mass.; Bullitt Bldg, Phila., Pa.; Hamilton Bldg, Pittsburgh, Pa.; Johnson Bldg, Cincinnati, O.; 138 Jackson Bldg, Chicago, Ill.; Bank of Commerce, St. Louis, Mo.; Cotton Exchange, New Orleans. 55.
Tredegar Iron Works, Richmond, Va.
Weir Frog Co., Front and Water sts. Cincinnati, O. 47.
White, R. T., 12 Pearl st., Boston, Mass.
Wilsons, Pease & Co., Middleborough-on-Tees, England.

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Rail Fastenings.

Allentown Rolling Mills (The), Allentown, Pa.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carey, Geo. H., 1 B'way, N. Y.
Cleveland Rolling Mill Co., Cleveland, O.
Colorado Coal & Iron Co., Denver, Col.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Fisher Rail Joint Works, Trenton, N. J.
Hoose Mfg. Co., N. Y.
Humphreys & Layce, 1 B'way, N. Y.
Innes, Thos. B. & Co., 115 B'way, N. Y.
Jordan, F., 200 B'way, N. Y.
Laramie Rolling Mills (F. E. Scrymser), Laramie City, W. T.
Lewis, Henry & Co., 234 S. 4th st., Phila., Pa.
Logan, James H., Penn Bldg, Pittsburgh, Pa. 53.
Mengis, M. C., 12 B'way, N. Y.
Metcalf, Paul & Co., Pittsburgh, Pa.
Nat. Lock Washer Co., Newark, N. J.
North Chicago Rolling Mill Co., 17 Metropolitan Blk., Chicago, Ill.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. 72.
St. Louis Bolt & Iron Co., St. Louis, Mo.
Sellers, Morris & Co., 6 Ashland Block, Chicago, Ill.
Stark Nut Lock Co, 918 N. 2d st., St. Louis, Mo.
Stroud & Co., 104 John st., N. Y.
Tredegar Co., Richmond, Va.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Vulcanized Fibre Co., Wilmington, Del.; 15 Dey st., N. Y. 96.

Rail Joints.

Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Fisher Rail Joint Works (The), Trenton, N. J.
McKay, James & Co., Pittsburgh, Pa.
Montour Iron & Steel Co., Danville, Pa.; 216 S. 3d st., Phila., Pa
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Siegel John, Montreal, Canada.
Standard Railway Joint Co., 6 Cortlandt st., N. Y.
Stark Nut Lock Co., 918 N. 2d st., St. Louis, Mo.; Stewart Bldg., N. Y.

Rail Mills and their Agents.

Abbott Iron Works, P. O. box 65., Baltimore, Md.
Ætna Iron & Steel Co., Bridgeport, O.
Akron Iron Works, Akron, O.
Allentown Rolling Mills (The), Allentown, Pa.
Allegheny, Monongahela & Birmingham Iron Works, Pittsburgh, Pa.
Alliamia Rolling Mill, Steubenville, O.
American Iron & Steel Works, Pittsburgh, Pa.
Barrows & Co., 64 Broadway, N. Y.
Bethlehem Iron Co., Bethlehem, Pa.
Birmingham Rolling Mill, Louisville, Ky.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Cambria Iron Co., Philadelphia, Pa. 2.
Carnegie, Phipps & Co., Pittsburgh, Pa.
Central Pacific Railroad Rolling Mill, Sacramento, Cal.
Central Iron & Steel Co., Brazil, Ind.
Cleveland Rolling Mill Co., Cleveland, O.
Colorado Coal & Iron Co., Denver, Col,
Columbus Rolling Mill, Columbus, O.
Combination Steel & Iron Co., Chester, Pa.
Cooper, Hewitt & Co., 17 Burling Slip, N. Y.
Cortland Top & Rail Co., Cortland, N. Y.
Crescent Iron Works, Pomeroy (Meigs Co.), O.
Cumberland Rolling Mill, Cumberland, Md.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Dickson Mfg. Co., Scranton, Pa.
Edgar Thompson Steel Works, Pittsburgh, Pa.
Etting, Edward J., 222 S. 3d st., Phila., Pa.
Fiske, Alex. P., 66 B'way, N. Y.
Fort Pitt Iron & Steel Works, Pittsburgh, Pa.
Gill, Thompson & Co., 210 S. 3d st., Phila., Pa.
Glendower Iron Works, Danville, Pa.
Green Ridge Iron Works, Scranton, Pa.
Helmbacher Forge & Rolling Mills Co., N. W. c. 5th & Market sts., St. Louis, Mo.
Heyn, Alfred, 47 B'way, N. Y.
Houston Rolling Mills & Iron Co., Houston, Texas.
Indianapolis Rolling Mill, Indianapolis, Ind.
Innes, Thos. B. & Co., 115 B'way, N. Y.
Ironton Rolling Mill, Ironton, O.
Joliet Steel Works, Joliet, Ill.
Knoxville Iron Co., Knoxville, Tenn.
Kensington Iron Works, Pittsburgh, Pa.
Lackawanna Iron & Steel Co., Scranton, Pa.
Laclede Rolling Mill, St. Louis, Mo.
Lawrence Iron & Steel Co., Ironton, O.
Leavitt & Co., C. W., 161 Broadway, N. Y.
Loohiel Iron & Steel Works, Harrisburg, Pa.
Logan, James H., Penn. Bldg., Pittsburgh, Pa. 53
Lookout Iron Co., Chattanooga, Tenn.
McDonald Rolling Mill, St. Louis, Mo.
McKenney Tubular Rail Co., Chicago, Ill.
Massillon Rolling Mill Co., Portsmouth, O.
Montour Iron & Steel Works, Danville, Pa.
New Albany Rail Mill Co., New Albany, Ind.
New Jersey Steel & Iron Co., Trenton, N. J.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., Chicago, Ill.; Milwaukee, Wis.
Ogden Iron Works, Ogden, Utah.
Ohio Iron Co., Zanesville, O.
Pacific Rolling Mill Co., San Francisco, Cal.
Pennsylvania Steel Co., Steelton, Pa. viii.
Philadelphia & Reading Rolling Mill, Reading, Pa.
Phœnix Iron Works, Philadelphia, Pa.
Pittsburgh Bessemer Steel Co., Pittsburgh, Pa.
Polo Alto Rolling Mill, Pottsville, Pa.
Portland Rolling Mill (Po. O. Box 1386), Portland, Me.
Pottsville Iron & Steel Co., Pottsville, Pa.
Roane Iron Co., Chattanooga, Tenn.
Riverside Iron Works, Wheeling, W. Va.
St. Louis Bolt & Iron Co., St. Louis, Mo.
St. Louis Bolt & Nut Co., St. Louis, Mo.
St. Louis Oil & Steel Co., St. Louis, Mo.
Sandusky Rolling Mill & Mfg. Co., Sandusky, Ohio.
Schuylkill Haven Rolling Mill, Pottsville, Pa.
Scranton Steel Co., Scranton, Pa.
Sharon Iron Co., Sharon, Pa.
Shenango Iron Works, New Castle, Pa.
Sligo Iron Works, Pittsburgh, Pa.
Springfield Iron Co., Springfield, Ill.
Spuyten Duyvil Rolling Mill, Spuyten Duyvil, N. Y.
Swift's Iron & Steel Works, Newport, Ky.
Troy Steel & Iron Works, Troy, N. Y.
Trumbull Iron Co., Girard, O.
Tudor Iron Works, St. Louis, Mo.
Union Iron Mills, Pittsburgh, Pa.
Union Iron Works, Cleveland, O.; Buffalo, N. Y.
Union Steel Co. (The), Chicago, Ill.
Union Pacific Rolling Mills, Laramie City, Wy. Terr.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Virginia Nail & Iron Works, Lynchburgh, Va.
Vulcan Works, St. Louis, Mo.
Wabash Iron Co., Terre Haute, Ind.
Wayne Iron & Steel Works, Pittsburgh, Pa.
Western Iron Co., Rosedale, Kan.
Worcester Steel Works P. O. Box 967, Worcester, Mass.
Zanesville Iron Works, Zanesville, O.

Rail Splices.

Lookout Iron Co., Chattanooga, Tenn.
Pennsylvania Steel Co., Steelton, Pa. viii.
Tudor Iron Works, 3d and St. Charles sts., St. Louis, Mo.

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Rail—Bessemer Steel.

Bethlehem Iron Co., Bethlehem, Pa.
Cambria Iron Works, 218 S. 4th st., Phila., Pa. **2.**
Cleveland Rolling Mill Co., Cleveland, O.
Colorado Coal & Iron Co., South Pueblo, Col.
Edgar Thompson Steel Works, Carnegie Bros. & Co. (Ltd.), 48 5th ave., Pittsburgh, Pa.
Homestead Steel Works, Carnegie, Phipps & Co. (Ltd.), Pittsburgh, Pa.
Joliet Steel Works, Home Ins. Bldg., Chicago, Ill.
Lackawanna Iron & Steel Works (Lackawanna Iron & Coal Co.), Scranton, Pa.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. **viii.**
Phila. & Reading Coal & Iron Co., Reading, Pa.
Roane Iron Co., Chattanooga, Tenn.
Scranton Steel Co., Scranton, Pa.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.
Troy Steel & Iron Co., Troy, N. Y.
Union Steel Co., 1st National Bank Bldg., Chicago, Ill.
Western Steel Co., St. Louis, Mo.
Worcester Steel Works, Worcester, Mass.

Rails—Flat (Iron & Steel).

Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Kensington Iron Works (H. Lloyd, Son & Co.), Pittsburgh, Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 n. 3d st., St. Louis, Mo.
Riverside Iron Works, Wheeling, W. Va.

Rails—Steel—Foreign.

Humphreys & Sayce, 1 Broadway, N. Y.
Lorner, Jr., G. (German), Montreal, Canada.
Stroud & Co., 104 John st., N. Y.
Weir Rogers & Co., 45 Broadway, N. Y. **5.**

Rails—Iron.

Allentown Rolling Mills, Allentown, Pa.
American Iron & Steel Works (Jones & Laughlins, Ltd.), Pittsburgh, Pa.
Barrows & Co., 66 Broadway, N. Y.
Bessemer Rolling Mills, Bessemer, Ala.
Bethlehem Iron Co., Bethlehem, Pa.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Carnegie, Phipps & Co., 48 Fifth av., Pittsburgh, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Colorado Coal & Iron Co., South Pueblo, Col.
Indianapolis Rolling Mill Co., Indianapolis, Ind.
Ironton Rolling Mill, New York & Ohio Iron & Steel Co., Ironton, O.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Lackawanna Iron & Coal Co., Scranton, Pa.
Lewis, Henry & Co., 234 S. 4th st., Phila., Pa.
Lloyd, H. Sons & Co., Pittsburgh, Pa.
Lookout Iron Co., Chattanooga, Tenn.
Mengis, M. C., 12 Broadway, N. Y.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.; Danville, Pa.
Murdock & Co., 15 7th av., Pittsburgh, Pa.
Naylor & Co., 99 John st., N. Y.
New York Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. **viii.**
Phila. & Reading Coal & Iron Co., Reading, Pa.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Robinson & Orr, Pittsburgh, Pa. **72.**
Scranton Steel Co (The), 56 B'way, N. Y.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Spuyten Duyvil Rolling Mill, Welch & Barnum, 11 Pine st., N. Y.
Tudor Iron Works, St. Louis, Mo.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Young & Co., 61 William st., N. Y.

Rails—Mine.

Colorado Coal & Iron Co., South Pueblo, Col.
Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Laramie Rolling Mills (F. E. Scrymser), Laramie City, W. T.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.
Western Iron Co., Rosedale, Kansas.

Rails—Second Hand.

Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Barrows & Co., 64 B'way, N. Y.
Boynton, Geo. A., 47 Broadway, N. Y.
Buss & Norton, 138 Jackson st., Chicago, Ill.
Cahill, Collins & Co., St. Louis, Mo.
Carey, Geo. H., 1 B'way, N. Y.
Collins, H. E. & Co., Lewis Block, Pittsburgh, Pa.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Etting, Edward J., 222 S. 3d st., Phila., Pa.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Humphreys & Sayce, 1 B'way, N. Y.
Innes, Thos. B. & Co., 115 B'way, N. Y.
Jordan, F., 200 B'way, N. Y.
Leavitt, C. W. & Co., 161 B'way, N. Y.
Lewis, Henry & Co., 234 S. 4th st., Phila., Pa.
Logan, James H., Penn Bldg., Pittsburgh, Pa. **53.**
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. **72.**
Middleton, W. S., 52 John st., N. Y.
Neil Bros., 612 Liberty st., Pittsburgh, Pa.
N. Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
Pape & Bro., Thos. J., 292 Pearl st., N. Y.
Saxten, J. C., 52 B'way, N. Y.
Stroud & Co., 104 John st., N. Y.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Whiton, A. S., 115 B'way, N. Y.

Rails—Siemens-Martin Steel.

Cleveland Rolling Mill Co., Clevelend, O.

Rails—Slot Cable R. R.

Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.

Rails—Steel, Dealers.

Barrows & Co., 66 B'way, N. Y.
Boynton, Geo. A., 47 B'way, N. Y.
Carey, Geo. H., 1 B'way, N. Y.
Child, O. W. & Co., 150 B'way, N. Y.
Collins, H. E. & Co., 34 Lewis Blk., Pittsburgh, Pa.
Delafield Tallmadge, 95 Liberty st., N. Y.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Heyn, Alfred, 47 B'way, N. Y.
Hogan, John L. & Co., 216 S. 4th st., Phila., Pa.
Humphreys & Sayce, 1 B'way, N. Y.
Jacobus, E. Y., Potter Bldg., N. Y.
Jordan, F., 200 B'way, N. Y.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Leavitt, C. A. & Co., 161 B'way, N. Y.
Levis, Henry & Co., 234 S. 4th st., Phila., Pa.

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Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Mengis, M. C. 12 B'way, N. Y.
Munngerde & Ellerbe, Birmingham, Ala.
Murdock & Co., 15 7th ave., Pittsburgh, Pa.
Naylor & Co., 99 John st., N. Y.
N. Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
Pape, Thos. J. & Bro., 292 Pearl st., N. Y.
Pugh, R. H., 115 Dearborn st., Chicago, Ill.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. 72.
Stroud & Co., 104 John st., N. Y.
Whiton, A. S., 115 B'way. N. Y.
Young & Co., 61 William st., N. Y.

Rails—Steel, Manufacturers.

American Iron & Steel Works, Jones & Laughlins (Ltd.), Pittsburgh, Pa.
Bethlehem Iron Co. (The), Bethlehem, Pa.; 42 Wall st., N. Y.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carnegie Bros. & Co. (Ltd.), 48 5th ave., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th ave., Pittsburgh, Pa.
Cleveland Rolling Mill Co., Nat'l Bank Bldg, Cleveland, O.
Colorado Coal & Iron Co., South Pueblo, Col.
Jacobus, E. Y., 38 Park Row, N. Y.
Joliet Steel Co., Home Ins. Bldg., Chicago, Ill.
Lackawanna Iron & Coal Co., Scranton, Pa.
Montour Iron & Steel Co., Danville, Pa.; 216 S. 3d st., Phila., Pa.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa.; 2 Wall st., N. Y. viii.
Scranton Steel Co., Scranton, Pa.; 47 B'way, N. Y.
Troy Steel & Iron Co., Troy, N. Y.; 26 B'way, N. Y.
Union Steel Co. (The), 1st Nat. Bank Bldg., Chicago, Ill.
Vulcan Works (Western Steel Co.), St. Louis, Mo.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Worcester Steel Works, 14 Bloomingdale st., Worcester, Mass.

Rails—Steel Street.

Ætna Iron & Steel Co., Bridgeport, O.
Alabama Rolling Mill Co., Birmingham, Ala.
Allenton Rolling Mills, 237 S. 3d st., Phila., Pa.
Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2
Carnegie, Phipps & Co. (Ltd.), 48 Fifth av., Pittsburgh, Pa.
Craig, Wm. P., 95 Liberty st., N. Y.
Edgerton, Geo. M., 204 N. 3d st, St. Louis, Mo.
Fulton Foundry, 22 Merwin st., Cleveland, O.
Hains Bros., 55 B'way, N. Y.
Horace, A. Keefer Co. (The), Kansas City, Mo. 88.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co., 712 Mut. Life Bldg., N. Y.; 6 Oliver st., Boston; Bullitt Bldg., Phila.; Hamilton Bldg., Pittsburgh; Johnson Bldg., Cincinnati; 138 Jackson Bldg., Chicago; Bank of Commerce Bldg., St. Louis; Cotton Ex., New Orleans. 55.
Knoxville Iron Co., Knoxville, Tenn.
Longstreet, D. F., Providence, R. I.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Metallic Street Ry. Supply Co., Albany, N. Y.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Montour Iron & Steel Co., Danville, Pa.
New Albany Rail Mill Co., New Albany, Ind.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. viii.
Post & Company, Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.; Chicago, Ill.
Springfield Iron Co. (The), Springfield, Mass.
Street Ry. Supply Co., Cleveland, O.
Swift's Iron & Steel Works, Newport, Ky.
Tudor Iron Works, St. Louis, Mo.
Way, Rhodes & Blankley, 23d and Wood sts., Phila., Pa.
Western Iron Co., Rosedale, Kas.
Worcester Steel Works, Worcester, Mass.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. and Washington av., Phila., Pa.
White, R. T., Pearl st., Boston, Mass.
Wright Construction Co., Phœnix Bldg., Chicago, Ill.

Rails—Street Car (Curved).

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Fulton Foundry, Cleveland, O.
Hains Bros., 55 B'way, N. Y.
Horace, A. Keefer Co. (The), Kansas City, Mo. 88.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Johnson Steel Street Rail Co., Johnstown, Pa. 55.
Lewis & Fowler Mfg. Co., 27-35 Walworth st., Brooklyn, N. Y.
Longstreet, D. F., Providence, R. I.
Metallic Street R'y Supply Co., Albany, N. Y.
Meysenburg, O. W. & Co., 204 n. 3d st., St. Louis, Mo.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. viii.
Pugh & Russell, Stewart Bldg., N. Y.
St. Thomas Car Wheel Co., St. Thomas, Ont., Canada.
Street R'y Supply Co., Cleveland, O.
Wm. Wharton, Jr. & Co. (Inc.), 25th st. & Washington av., Philadelphia, Pa.
Whiting Mfg. Co., Cedar Rapids, Iowa.

Rails—"T."

Ætna Iron & Steel Co., Bridgeport, O.
Akron Iron Co., Akron, O.
Alabama Rolling Mill Co., Birmingham, Ala.
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Bros. & Co., 48 5th av., Pittsburgh, Pa.
Central Iron & Steel Co., Brazil, Ind.
Columbus Iron Works (P. Hayden Saddlery Hardware Co.), Columbus, O.
Helmbacher Forge & Rolling Mills Co., St. Louis, Mo.
Houston Rolling Mills, Houston, Tex.
Kensington Iron Works (H. Lloyd, Son & Co.), Pittsburgh, Pa.
Knoxville Iron Co., Knoxville, Tenn.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 n. 3d st., St. Louis, Mo.
Lawrence Iron & Steel Co., Ironton, O.
New Albany Rail Mill Co., New Albany, Ind.
Reeves Iron Co., Canal Dover, O.
Riverside Iron Works, Wheeling, W. Va.
Rock Island Arsenal, Rock Island, Ill.
Schuylkill Haven Iron Co., Pottsville, Pa.
Sharon Iron Co., Sharon, Pa.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.

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Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Swift's Iron & Steel Works, Newport, Ky.
Trumbull Iron Co., Girard, O.
Tudor Iron Works, 3d and St. Charles sts., St. Louis, Mo.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Wabash Iron Co., Terre Haute, Ind.
Zanesville Iron Works (Ohio Iron Co.), Zanesville, O.

Rails—Tram.

Birmingham Rolling Mill Co., Birmingham, Ala.
Hathaway & Robison, 41 Case Bldg, Cleveland, O.
New Albany Rail Mill Co., New Albany, Ind.
Tudor Iron Works, 509 N. 3d st., St. Louis, Mo.

Railings—Brass, Iron and Wire.

Acme Steam Wire & Iron Railings Works, 80 to 90 Pearl st., B'klyn, N. Y.
Bataille, A., 122 W. B'way, N. Y.
Bataille, Achille, 122 W. B'way, N. Y.
Darby, Edward & Sons, 231 and 233 Arch st., Phila., Pa.
Estey, W. S., 71 Fulton st., N. Y.
Fulton Wire Works, 63 Fulton st., N. Y.
Hopkins & Co. N. Y. Steam Wire Works, 90 W. B'way, N. Y.
Manly & Cooper Mfg. Co., 4150 Elm av., Phila., Pa.; 271 B'way, N. Y.
Needles, Joseph A., 54 N. Front st., Phila., Pa.
Pittsburgh Wire & Railing Works, 205 Market st., Pittsburgh, Pa.
Reilly, James, 230 West st., N. Y.
Snead & Bibb, Louisville, Ky.
Snow, John, 76 and 78 Exchange st., Rochester, N. Y.

R. R. Advertising Agents.

Kelly & Son, Lowell, Mass. **78.**
Western, Benj. R., Liberty st., N. Y. **95.**
Peteler Railway Portable Mfg. Co., Minneapolis, Minn.

Ranges—Hotel, Car and S. S.

Bramhall, Deane & Co., 81 Market st., Chicago, Ill.
Cutler & Proctor Stove Co., Peoria, Ill.
Gem City Stove Co. (The), 311 to 325 N. Taylor st., Dayton, O.
Wilkes, S. Mfg. Co., Monroe & Clinton sts., Chicago, Ill.

Rams—Hydraulic.

Dickson Mfg. Co., Scranton, Pa.
Gleason & Bailey Mfg. Co., Seneca Falls, N. Y.
Douglas, W. & B., Middletown, Conn.
Humphreys Mfg. Co. (The), Mansfield, O.
Silver & Denning Mfg. Co., Salem, O.

Reamers.

Cleveland Twist Drill Co., 26 W. st., Cleveland, O. **24.**
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.
Standard Tool Co., Cleveland, O.; 33 Chambers st., N. Y. **49.**

Red Lead.

Anchor White Lead Co., 40-60 Culvert st., Cincinnati, O.
Boston Lead Mfg. Co., 162 Congress st., Boston, Mass.
Davis-Chambers Lead Co., 18 Burling Slip, N. Y.
Raynolds, C. T. & Co., 106 & 108 Fulton st., N. Y.
Wetherill & Bro., Phila., Pa.

Reels—Hose.

Adams, A. & Co., Cleveland, O.
Blair Mfg. Co., Springfield, Mass.
Conant Rubber Co., 28 Asylum st., Hartford, Conn.
Horton & Co., 53-59 E. 5th st., Cincinnati, O.
Mast, Foos & Co., Springfield, O.
New York Plow Co. (The), 57 Beekma st., N. Y.
Whitman Agricultural Co., 8th st. & Clark av., St. Louis, Mo.

Reflectors.

American Reflector Co., 132 N. 5th st., Phila., Pa.
Bailey Reflector Co., 113 Wood st., Pittsburgh, Pa.
Dayton Mfg. Co. (The), Dayton, O.
Empire Hydro-Carbon Co., 18 Exchange pl., N. Y.
Frink, Isaac P., 551 Pearl st., N. Y.
Goetz, B. Mfg. Co., 172-174 Mercer st., N. Y.
Heath, John N., 1323 W. 24th st., Phila., Pa.
Jacobson, C. F., 18 W. 23d st., N. Y.
Klemm, F., 132 N. 5th st., Phila., Pa.
National Reflector Co., Bellevue, O.
Pacific Lamp & Reflector Factory, 583 Mission st., San Francisco, Cal.
Phœnix Glass Co., 729 B'way, N. Y.
Schryver, A. L., 174 Mercer st., N. Y.
U. S. Lighting & Ventilating Co., 24 W. 4th st., N. Y.
U. S. Wenham Patent Gas Lamp Co. 18 W. 23d st., N. Y.
Wheeler Reflector Co., 24 Washington st., Boston, Mass.; 53 5th av., Chicago, Ill.

Reflector Shades for Electric Lights.

McCreary, A. A., 18 Cortlandt st., N. Y.

Registers, Check, Ticket and Fare Punches.

Atkins, D. F. & Co., Norwalk, Conn.
Autographic Register Co., 287 B'way, N. Y.
Automatic Bank Punch Co., 7 Beekman st., N. Y.
Beadle, Edward, 1193 Broadway, N. Y. **73.**
Bell Punch Co. (The), (Ltd.), 27 Tabernacle st. Finsbury sq., E. C., London, Eng.
Benton Mfg. Co., 171 Broadway, N. Y.
Brill, J. G. Co., Phila., Pa.
Crawford, John, 1215 Broadway, N. Y.
Crocker, L. O., East Braintree, Mass.
Dunn Safety Ticket & Register Co., 140 Nassau st. N. Y.
French, S. A., 400 Broome st., N. Y. **65.**
Greeley, E. S. & Co. (The), 5 & 7 Dey st., N. Y.
Hains Bros., 55 Broadway, N. Y.
Hanscom, J. F., 232 Friend st., Boston, Mass.
Hart & Duff Hat Co., 113 n. B'way, St. Louis, Mo.
Hoggson & Pettis Mfg. Co. (The), 64-68 Court st., New Haven, Conn.
Horstman, Bros. & Co., 5th & Cherry sts., Philadelphia, Pa.
Johnson, William, Newark, N. J.
Kane, Joseph & Sons, Leeds, England.
Kruse, Check & Adding Machine Co., 124 E. 14th st., N. Y.
Laclede Car Co., 4500 n. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co., 27-35 Walworth st., Brooklyn, N. Y.
McGill, Bros. & Co., 306 Dearborn st., Chicago, Ill.
Martin, Rufus & Co., 13 Park Row, N. Y. **52.**
Marshall Fare Register Co., Cleveland, O.
Myers Mfg. Co. Covington, Ky.
National Autographic Register Co., 233 B'way, N. Y.
Post & Co., 161-165 W. Pearl st., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Railway Register Mfg. Co., 1193 Broadway, N. Y. **73.**
Railway Register Co., 59 State st., Chicago, Ill.

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Rand, McNally & Co., 148 Monroe st., Chicago, Ill.
Schilbach, H., Hobart, Ind.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.
Standard Index & Register Co., 138 Fulton st., N. Y.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Wilcox, W. W., 131 Lake st., Chicago, Ill.
Woodman, R., 169 High st., Boston, Mass.

Registers and Ventilators.

Abendroth, G. T., 28 Cliff st., N. Y.
Air Siphon Ventilator Co., 207 4½ st., Washington, D. C.
Anderson & Co., 202 Mercer st., N. Y.
Am. Ventilating Co., 66 State st., Boston, Mass.
Andrews & Johnson, 59 Lake st., Chicago, Ill.
Atwell Mfg. Co., Cincinnati, O.
Automatic Ventilating Register Co., 113 Devonshire st., Boston, Mass.
Baker & Smith Co., 83 Jackson st, Chicago, Ill.
Bartlett, Hayward & Co. (Pratt & Scott), Balt., Md.
Bayles, H. H. & Co., 106 South st., N. Y.
Benton, John B., 291 W. 11th st., N. Y.
Bickelhoupt, G., 1622 Broadway, N. Y.
Bickelhoupt Bros., 218 W. 37th st., N. Y.
Bracher Ventilator Co., 153 Fulton st, N. Y.
Bretch, A., 312 E. 5th st., Dayton, O.
Bristol, A. M., Rochester, N. Y.
Buffalo Register Works, 430 Niagara st., Buffalo, N. Y.
Burr, R., 6 Province st., Boston, Mass.
Chubbuck, L. H. & Co., 30 Hayward pl., Boston, Mass.
Climax Mfg. Co., 25 Lake st., Chicago, Ill.
Clow, James B. & Son, 222 Lake st., Chicago, Ill.
Cook, E. H. & Co., 20 Swan st., Buffalo, N. Y.
Cooper, J., 128 Harrison av., Boston, Mass.
Cosgrove & Duggett, 383-389 7th st., Jersey City, N. J.
Creamer, W. G. & Co., 96 John st., N. Y.
Cushing, Daniel & Co., 218 A Middlesex st., Lowell, Mass.
Darling, Free & Co., Lewiston, Me.
Demond & Co., 38 Cortlandt st., N. Y.
Detroit Blower Co., Detroit, Mich.
Dixon & Lipsett, 100 Blackstone st., Boston, Mass.
Donegan & Swift, 174 Fulton st., N. Y.
Drennan, C. M., 17 Charles st., Boston, Mass.
Dry Dock Sheet Metal Works, Guion, c. Orleans st., Detroit, Mich.
Easterbrook, Wm., 311 Cherry st., Phila., Pa.
Economic Gas Engine Co., 34 Dey st., N. Y.
Eureka Ventilating Co., 234 Devonshire st., Boston, Mass.
Excelsior Mfg. Co., 13 Park row, N. Y.
Exhaust Ventilator Co., 165 3d av., Chicago, Ill.
Fenn, G., 94 Blackstone st., Boston, Mass.
Fredericks, C. A., 83 Fulton st., N. Y.
Free, Curtis & Co., Lewiston, Me.
Frentel's, A., Sons, 147 Elm st., N. Y.
Gem Ventilator Co., 5 Mansion House Block, Troy, N. Y.
Globe Ventilator Co., 203 River st., Troy, N. Y.
Gold's Heater Mfg. Co., 624 E. 14th st., N. Y.
Gonge Heating & Ventilating Co., 548 Broadway, N. Y.
Gosline, D. P. & Co., 32 Oliver st., Boston, Mass.
Greaves, Frank, 47 Liberty st., N. Y.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Harvey, C. D., 23 Stevenson st., San Francisco, Cal.
Herenden, C. B., 108 Bank st., Cleveland, O.
Highton, Wm. & Sons, 55 Charlestown st., Boston, Mass.
Holbrook & Mann Co. (The), 337 Dearborn st., Chicago, Ill.
Howard & Morse, 45 Fulton st., N. Y.
Hummel, Jas. H. 153 Fulton st., N. Y.
Huyett & Smith Mfg. Co., 1400 Russell st., Detroit, Mich.
Hyslop, John, 208 E. 29th st., N. Y.
Jacobs, Charles C., Cordage Co. (The), 65 Walnut st., Cincinnati, O.
Jackson Architectural Iron Works, 315 E. 28th st., N. Y.
Kansas City Corrugated Iron & Ventilating Co., Kansas City, Mo.
Lamont, J. G., 30 Beverly st., Boston, Mass.
Lamoreux, Chauncey H., 313 Spring st., N. Y.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Lindemann, W., 124 Stanhope st., Brooklyn, N. Y.
Lombard, Geo. R. & Co., Augusta, Ga.
Merchant & Co., Phila., Pa.; Chicago, Ill.
Mihan, P., 1 Pemberton sq., Boston, Mass.
McDonald, B. & S., Ventilating Co., Rockland, Me.
McHugh, John F., 1250 Broadway, N. Y.
McMurray, Robert T., 9½ Dey st., N. Y.
Moore, Geo. R., Jr., 526 Cherry st., Phila., Pa.
Moseman, Geo. H. & Co., 28 Cliff st., N. Y.
Mt. Penn Stove Works, Reading, Pa.
National Ventilating Co., 92 Pearl st., Boston, Mass.
N. Y. Exhaust Ventilator Co., 45 Fulton st., N. Y.
N. Y. Lighting & Ventilator Co., 68 W. 4th st., N. Y.
O'Reilly, Thos., 726 Third av., N. Y.
Ozone Machine Co., 206 Broadway, N. Y.
Pardessus, Semon J., 10 College pl., N. Y.
Philadelphia Exhaust Ventilator Co., 121 N. 4th st., Phila., Pa.
Pond, Moses & Co., 79-81 Blackstone st., Boston, Mass.
Preble Machine Works Co., 38 W. Monroe st., Chicago, Ill.
Protective Ventilator Co., 153 Fulton st., N. Y.
Putnam & Wineman, 107 Winder st., Detroit, Mich.
Richardson & Boynton Co., 84 Lake st., Chicago, Ill.
Rieffel, J. P., 504 W. 24th st., N. Y.
Robinson, L., 80 Water st., Boston, Mass.
Rose, Reuben M., 15 E. 14th st., N. Y.
Ruttan Mfg. Co., 68 Lake st., Chicago, Ill.
Ruttan Ventilating & Heating Co., Kansas City, Mo.
Sargent, Greenleaf & Brooks, 43 Franklin st., Chicago, Ill.
Simonds Mfg. Co., 51 Union st, Boston, Mass.
Simonds Mfg. Co., 50 Cliff st., N. Y.
Stafford's Ventilating Co., 89 Liberty st., N. Y.
Star Ventilating Co., 10 & 12 Fetter lane, Phila., Pa.
Stearns, E. C. & Co., Syracuse, N. Y.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Summerhays, C. K., 226 Pearl st., Buffalo, N. Y.
Summers, A. B., 871½ Broadway, Brooklyn, N. Y.
Taylor, J., 45 Pearl st., N. Y.
Troy Architectural Iron Works & Foundry, 5th, c. Liberty st., Troy, N. Y.
Tuttle & Bailey Mfg. Co., 83 Beekman st., N. Y.
Unadilla Machine Works, Unadilla, N. Y.
U. S. Lighting & Ventilating Co., 60 W. 4th st., N. Y.
U. S. Ventilation Co., 80 Water st., Boston, Mass.
Van Noorden, E. & Co., 387 Harrison av., Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Williams, Geo. A., 85 Fulton st., N. Y.
Wing Disc Fan Exhauster, 51 Union st., Boston, Mass.

Registers—Gas.

Chaplin & Fulton, Chancery lane & First av., Pittsburgh, Pa.
Chapman, J. L. & Co., P. O. box 530, Phila., Pa.
Gas Saving Co., 171 B'way, N. Y.
Union Water Meter Co., Worcester, Mass.

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Regulators—Heat.

Butz Thermo-Electric Regulator Co., Minneapolis, Minn.
National Electric Service Co., 120 B'way, N.Y.; Boston; Chicago.

Regulators—Pump.

Curtis Regulator Co., 63 Beverly st., Boston, Mass. **30.**
Knowles' Steam Pump Works, 93 Liberty st., N. Y.
Mason Regulator Co., 22 Central st., Boston, Mass. **22.**

Regulators—Pressure.

Acton, John, Franklin, n. Centre st., N. Y.
Aller, Amos, 109 Liberty st., N. Y.
Chaplin, Fulton & Co. (Ltd.), Pittsburgh, Pa.
Chapman, J. L. & Co., Phila., Pa.
Curtis Regulator Co., 63 Beverly st., Boston, Mass. **30.**
Davis, G. M. & Co., 20 S. Canal st., Chicago, Ill. **57.**
Goodwin Gas Stove & Meter Co., 142 Chambers st., N Y.; Phila.; Chicago.
Hazlett & Bennett, Meadville, Pa.
Hine & Robertson, 45 Cortlandt st., N.Y. **82.**
Hohenstein Mfg. Co., 49 Dey st., N.Y.; 46 N. 7th st., Phila., Pa.
Hopper, T. C. & Co., 2227 Wood st., Phila., Pa.
Kelly & Jones Co., 75 John st., N. Y.
Kieley, Timothy, 11 W. 13th st., N. Y.
Lutner, T. E., Phila., Pa.
Mason Regulator Co., 22 Central st., Boston, Mass. **22.**
Ross Valve Co., 654 River st., Troy, N. Y.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Specialty Mfg. Co., Allegheny, Pa.
Union Water Meter Co., Worcester, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Watson & McDaniel, 144 n. 7th st., Phila., Pa.
Worthington, Henry R., 86-88 Liberty st., N. Y.

Regulators—Steam Pressure.

Aller, A., 109 Liberty st., N. Y.
Bowker & Tripp, New Brunswick, N. J.
Curtis Regulator Co., 63 Beverly st., Boston, Mass. **30.**
Dickson Mfg. Co., Scranton, Pa.
Feed-Water Heater Co., St. Johnsbury, Vt.
Gage Machine Works, Waterford, N. Y.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Locke Bros., Salem, Mass.
Mason Regulator Co., 22 Central st., Boston, Mass. **22.**
Pickering, T. R. & Co., Portland, Conn.
Worthington, Henry R., 86-88 Liberty st., N. Y. **89.**

Regulators—Steam Pressure (Kellam's).

Hine & Robertson, 45 Cortlandt st., N. Y. **82.**

Regulators—Steam Damper.

Belfield, H. & Co., 435 n. Broad st., Phila., Pa.
Curtis Regular Co. (The), 59 Beverly st., Boston, Mass. **30.**
Globe Steam Heater Co., North Wales, Pa.
Hine & Robertson, 45 Cortland st., N. Y. **82.**
Hoffman Lubricator Co., Binghamton, N. Y.
Knowles Loom Works, 57 Jackson st., Worcester, Mass.
Le Van W. Barnet, 3607 Baring st., Phila., Pa.
Locke Bros., Salem, Mass.
Lutner, T. E., 1603 S. Front st., Phila., Pa.
Mason Regulator Co., 22 Central st., Boston, Mass. **22.**
Noyes, Wm. Jr., 218 Centre st., N. Y.
Samuels, A. E., 63 W. 9th st., N. Y.

Regulators—Time.

Howard, E., Watch & Clock Co. (The), 378 Washington st., Boston, Mass.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Teeke, Chas. & Co., 214 Asylum st., Hartford, Conn.

Respirators.

Taylor, John & Co., 65 1st st., San Francisco, Cal. **63.**

Rivet Mfrs.

Albert Field Tack Co., 78 Chambers st., N. Y.
Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
American Screw Co., Providence, R. I.
American Tack Co., 116 Chambers st., N. Y.
Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.
Baltimore Rivet & Spike Works, President, c. Fawn sts., Baltimore, Md.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Birmingham Bridge Co., Birmingham, Ala.
Blake & Johnson, Waterbury, Conn.
Bridgeport Brass Co., 19 Murray st., N. Y.
Burden Iron Co., Troy, N. Y.
Cobb & Drew, Plymouth, Mass.; 165 Greenwich st., N. Y.; 47 and 49 N. 2d st., Phila., Pa.
Choutean, Harrison & Valle Iron Co., 939 N. 2d st., St. Louis, Mo.
Clark Bros. & Co., Millidale, Conn.
Condit, Fuller & Co., Cleveland, O.
Cumberland Rolling Mills, Mount Clare, Baltimore, Md.
Daniels, D. N., Waterbury, Conn.
Disosway & Henderson, 165 Greenwich st., N. Y.
Dover Iron Works, Dover, N. J.
Empire Rivet Works, ft. Jay st., B'klyn, N. Y.
Falls Rivet Co., Cuyahoga Falls, O.
Franklin Moore Co. (The), Winsted, Conn.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Gilmor, Wm., President & Fawn sts., Baltimore, Md.
Goss, J. C., 16 Woodward ave., Detroit, Mich.
Gould, Clarence P., 45 Mechanic st., Newark, N. J.
Graham, A. A., 67 N. 1st st., B'klyn, N. Y.
Hendricks Bros., 49 Cliff st., N. Y.
Holmes, Booth & Haydens, Waterbury, Conn.; 25 Park pl., N. Y.
Jersey City Spike & Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Lee & Prince, Worcester, Mass.
Levalley, C. W., Milwaukee, Wis.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Marland, Neely & Co., ft. S. 22d st., Pittsburgh, Pa.
Michigan Bolt & Nut Works, Detroit, Mich.
Moore, J., Marseilles, Ill.
National Rivet Co., 28 Artizan st., New Haven, Conn.
Newark Rivet Works, 146 Monroe st., Newark, N. J.
N. J. Steel & Iron Co., Trenton, N. J.
Old Colony Rivet Co., Kingston, Mass.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Painter, W., 28 N. Holiday st., Baltimore, Md.
Passiac Rolling Mill Co., Paterson, N. J.
Penn. Bolt & Nut Co., Lebanon, Pa.
Phœnix Lock Works, 135 and 137 Halsey st, Newark, N. J.
Plume & Atwood Mfg. Co., 115 Lake st., Chicago, Ill.; 18 Murray st., N. Y.; 71 Pearl st., Boston, Mass.; Waterbury, Conn.
Plymouth Tack & Rivet Works, Plymouth, Mass; 507 Commerce st., Phila., Pa.
Pollock, Alex, 212 West st., N. Y. **32.**
Pittsburgh Mfg. Co., 28th and Railroad sts., Pittsburgh, Pa.

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Reading Bolt & Nut Works (J. H. Sternbergh & Son), Reading, Pa.
Reed & Prince, Worcester, Mass.
Rome Iron Works, Rome, N. Y.
Renwick, J., 330 N. 2d. st., B'klyn, N. Y.
Schuylkill Haven Iron Co., Pottsville, Pa.
Severance, S., 53 Water st., Pittsburgh, Pa.
Shelvock & Partridge, Marseilles, Ill.
Slotted Rivet Co., 74 Bedford st., Boston, Mass.
Smith, H. D. & Co., Plantsville, Conn.
Spruce & Comstock, Waterbury, Conn.
Standard Rivet Co., Cleveland, O.
Timmes's, Peter Son, 281 N. 6th st., B'klyn, N. Y.
Townsend, W. P. & Co., 107 Market st., Pittsburgh, Pa.
Troy Steel & Iron Co., Troy, N. Y.; 26 Broadway, N. Y.
Turner & Seymour Mfg. Co. (The), Torrington, Conn.
Tubular Rive Co., 55 Lincoln st., Boston, M.
Upham, V. B. & Bro., John c. Jay st., Brooklyn, N. Y.
Wallace & Sons, 89 Chambers st., N. Y.
Warner, A. B. & Son, 28 West st., N. Y.

Rivets—Brass and Copper.

Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Blake & Johnson, Waterbury, Conn.
Bridgeport Brass Co, 19 Murray st., N. Y.; Bridgeport, Conn.
Cobb & Drew, Plymouth, Mass.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Holmes, Booth & Haydens, 25 Park pl., N. Y.; Waterbury, Conn.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Philadelphia, Pa.
Plume & Atwood Mfg. Co., Waterbury, Conn.; 18 Murray st., N. Y.; 71 Pearl st., Boston, Mass.
Rome Brass & Copper Mills, Rome, N, Y.
Upham, V. B. & Bro., Jay & John sts., Brooklyn, N. Y.
Wallace & Sons, 89 Chambers st., N. Y.; Ansonia, Conn.
Waterbury Brass Co., Waterbury, Conn.; 296 Broadway, N. Y.
Whitney & Star, 232 West st., N. Y.

Rivets—Ship, Steel and Tank.

Hoopes & Townsend, Philadelphia, Pa.
Standard Rivet Co, 180 Columbus st., Cleveland, O.

Riveters—Steam.

Sement, Miles & Co., Philadelphia, Pa.; 120 B'way, N.Y.

Road Bed—Street Railroad.

White, P. I., 12 Pearl st., Boston, Mass.

Road Graders and Scrapers.

Fay Mfg. Co. (The), Elyria, O.
Fleming Mfg. Co., Fort Wayne, Ind.
Goulds & Austin, Chicago, Ill.
Hoyle-Jones Mfg. Co., Martin's Ferry, O.
Iowa Road Grader Mfg. Co., Burlington, Iowa.
Pelts Mfg. Co., Marseilles, Ill.
Vulcan Road Machine Co., Media, Pa.
Western Wheel Scraper Co., Mt. Pleasant, Iowa.

Road Rollers.

Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. 7.
New York Plow Co. (The), 57 Beekman st., N. Y.
Marsh & Buckingham, New Milford, Conn.

Rock Breakers, Stone and Ore Crushers.

Abele, Chris, 253-255 W. 27th st., N. Y.
Blake Rock Crusher Co., 34th & Smallman st., Pittsburgh, Pa.
Blake Crusher Co., 25 Whitney av., New Haven, Conn.
Carlin's, Thomas, Sons, Lacock, c. Sandusky sts., Allegheny, Pa.
Chambers Bros. & Co., 52d st., below Lancaster av., Phila, Pa.
Clayton Air Compressor Works, 43 Dey st., N. Y. 9.
Copeland & Bacon, 85 Liberty st., N. Y.
Deuscher, H. P., Hamilton, O.
Dickson Mfg. Co., Scranton, Pa.
Elk Hill Coal & Iron Co., Scranton, Pa.
Farrell Foundry & Mach. Co., Ansonia, Conn.
Fraser & Chalmers, Union and Fulton sts., Chicago, Ill.
Gates Iron Works, 50 S. Clinton st., Chicago, Ill.
Hoagland, M., Rockaway, N. J.
Jennings, D. U., 108 Liberty st., N. Y.
Kaestner, Chas. & Co., 303 S. Canal st., Chicago, Ill.; 419 Walnut st., Phila., Pa.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lancaster, James H., 167 Broadway, N. Y. 4.
McLaughlin, Geo. T., 129 Fulton st., Boston, Mass.
Meech & Co., Cleveland, O.
Morey & Sperry Mining & Machine Co., 92 Liberty st., N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Porter Mfg. Co., Syracuse, N. Y.
Rawson & Morrison, 27 Main st., Cambridgeport, Mass.
Robinson-Rae Mfg. Co. (The), 134 Water st., Pittsburgh, Pa.
Savage, Son & Co., 135 Fremont st., San Francisco, Cal.
Sperry & Co., 95 Liberty st., N. Y.
Sweeney, W. A. & Bro., Jeffersonville, Ind.
Tasker, Stephen, T. M., Phila., Pa.
Totten & Co., 24th and R. R. sts., Pittsburgh, Pa.
Union Foundry & Machine Works, Rockaway, N. J.
Union Iron Works, San Francisco, Cal.
Waring, J. B. & Sons, 106 Liberty st., N. Y.
Young & Thomas, 42 Cortlandt st., N. Y.

Rock Drills.

American Diamond Rock Boring Co., 15 Cortlandt st., N. Y.
American Mfg. & Supply Co., 12 Dey st., N. Y.
American Rock Drill Co., Denver, Colorado.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Bullock, M. C. Mfg. Co., 138 Jackson st., Chicago, Ill. 10-11.
Burleigh Rock Drill Co., 115 Liberty st., N.Y.; Fitchburg, Mass.
Clayton Air Compressor Works, 43 Dey st.; N. Y.; 45-47 York st., Brooklyn, N.Y. 9.
Garratt, W. T. & Co., Fremont st., San Francisco, Cal.
Graydon & Denton Mfg. Co., 15 Cortlandt st., N. Y.
Hartsfeld Furnace Co. (Ltd.) (The), Cincinnati, O. 92.
Hartsfeld Portable Smelting Furnace & Mining Co., 90 Thornton st., Newport, Ky.
Holmes' Patent Rock Drill, B'way, c. 8th st., Brooklyn, N. Y.
Hussey Hand Rock Drill Co., 248 Main st., Buffalo, N. Y.
Idell, F. E., 41 Dey st., N. Y.
Ingersoll Rock Drill Co., 10 Park pl., N. Y.; 66 Canal st., Boston, Mass.
Kirk, Arthur & Son, 919 Duquesne way, Pittsburgh, Pa.
Knox Rock Blasting Co., 95 5th av., Pittsburgh, Pa.
Melcher, Chas. W., 811 N. 2d st., St. Louis, Mo.

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Middleton, W. S., 52 John st., N. Y.
Miners' Rock Drill Co., 39 B'way, N. Y.
Morris Machine & Iron Co., Dover, N.J.
Nashua Hand Rock Drill Co., 114 Milk st., Boston, Mass.
National Drill & Compressor Co., 76 Centre st., N. Y.
Park & Lacy, 8 California st., San Francisco, Cal.
Phelps, Lucius J., 13 Park row, N. Y.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Pierce, C. D., Drill Co., 29 Rose st., N. Y.
Pierce Well Excavator Co., ft. 6th st., L. I. City, N. Y.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Rand Drill Co., 23 Park pl., N.Y. 1.
Rix & Firth, 12 Tremont st., San Francisco, Cal.
Sampson, Geo. H., 231 State st., Boston, Mass.
Saxten, J. C., 52 B'way, N.Y.
Sergeant Drill Co., 16 Dey st., N.Y.
Standard Hand Rock Drill Co., 115 B'way, N.Y.
Sullivan Machine Co., Claremont, N.H.
U. S. Pneumatic Co., 171 B'way, N. Y.
Whitcomb, Geo. D., 33 Comm. Bk. Bldg., Chicago, Ill.
Wiggs & Bacon Co., Birmingham, Ala.
Woodward, C. W. & Co., 71 & 73 Oliver st., Boston, Mass.

Rods—Brake.

Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Dederick, Z. P., Sherman, Tex.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Laclede Car Co., 4500 N. Second st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Martin Rufus & Co., 13 Park Row, N. Y. 52.
Pugh & Russell, Stewart Building, N. Y.: Phœnix Building, Chicago, Ill.
Stephenson, John, Co., (Ltd.), 47 E. 27th st., Phœnix Building, Chicago, Ill.

Rods—Brass and Copper.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Brown & Bros., Tubing & Boiler Works, Waterbury, Conn.
Detroit Copper & Brass Rolling Mills, Detroit, Mich.
Griggs, E. D., 61-63 Duane st., N. Y.
Plume & Atwood Mfg. Co., 18 Murray st., N. Y.; 71 Pearl st., Boston, Mass.; 115 Lake st., Chicago, Ill.

Rods—Bridge.

Columbus Bolt Works, Columbus, O.
Harrisburg Car Mfg. Co. (The), Harrisb'g, Pa. 7.
Louisville Steam Forge Co., Louisville, Ky.
Michigan Bolt & Nut Works, Detroit, Mich.

Rods—Connecting

Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. 46.
Dickson Mfg. Co., Scranton, Pa.
Midvale Steel Co. (The), Nicetown, Phila., Pa.
New Albany Steam Forge Co., New Albany, Ind.
Topliff & Ely, Elyria, O.

Rods—Rubber.

Butler Hard Rubber Co. (The), 33 Mercer st., N. Y.
Universal Rubber Co. (The), 45 Rose st., N. Y.

Rods—Wire.

American Wire Co., Cleveland, O.
Braddock Wire Co., Pittsburgh, Pa.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Cambridge Rolling Mills, Gilmore & Eustis, Cambridgeport, Mass.
Champion Steel & Iron Works, Springfield, O.
Cleveland Rolling Mill Co., Cleveland, O.
Columbus Iron Works (P. Hayden Saddlery Hardware Co.), Columbus, O.
Cooper, Hewitt & Co., 17 Burling Slip, N. Y.
Gautier Steel Department of the Cambria Iron Co., Johnstown, Pa., 2.
Glen Iron Works, Allentown Rolling Mills, Allentown, Pa.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Howard Iron Works (Howard Rolling Mill Co.), Howard, Pa.
Hussey, Howe & Co., (Ltd.), Penn av. & 17th st., Pittsburgh, Pa.
H. P. Nail Co., Cleveland, O.
Milesburgh Iron Works (McCoy & Linn), Milesburgh, Pa.
New Haven Rolling Mill Co., New Haven, Conn.
New Jersey Steel & Iron Co., Trenton, N. J.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Oliver & Roberts Wire Co. (Ltd.), Pittsb'g, Pa.
Otis Iron & Steel Co., Cleveland, O.
Roebling's Sons Co. (John A.), Trenton, N. J.; 117 Liberty st., N. Y. 8.
Syracuse Iron Works, Syracuse, N. Y.
Trenton Iron Co., Trenton, N. J.
Troy Steel & Iron Co., Troy, N. Y.
Union Steel Co., 302 1st National Bank Bldg., Chicago, Ill.
Washburn & Moen Mfg. Co., Worcester, Mass.
Westerman Rolling Mill (Westerman & Co.), Lockport, N. Y.
Whitney, A. R. & Co., 17 Broadway, N. Y.
Williamsport Iron & Nail Works (Milton Iron Co.), Williamsport, Pa.

Rolls—Chilled Iron.

Arcade Malleable Iron Co., 63-67 Washington sq., Worcester, Mass.
Bement, Miles & Co., Callowhill & 21st sts., Philadelphia, Pa.
Betts Machine Co., Wilmington, Del.
Birmingham Iron Foundry, Birmingham, Conn.
Blake & Johnson, Waterbury, Conn.
Booth, Miller & Co., Youngstown, O.
Dickson Mfg. Co., Scranton, Pa.
Farrel Foundry & Machine Co., Ansonia, Conn.
Garrison, A. (Foundry Co.), 10-12 Wood st., Pittsburgh, Pa.
Gough, Edward, Allentown, Pa.
Holyoke Machine Co., Holyoke, Mass.
New Doty Mfg. Co., Janesville, Wis.
Noye, John T. Mfg. Co. (The), Buffalo, N. Y.
Phœnix Roll Works, 41st, 42d & A. V. R. R. sts., Pittsburgh, Pa.
Riverside Foundry Works (The), 26 Carter st., Cleveland, O.
Robinson-Rea Mfg. Co. (The), 134 Water st., Pittsburgh, Pa.
Totten & Co., Pittsburgh, Pa.
Waterbury Farrel F'dy & Machine Co., Waterbury, Conn.
Worcester Malleable Iron Works, Worcester, Mass.

Rolls—Rubber.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Combination Roll & Rubber Co., 62 Astor House, N. Y.
Gutta-Percha & Rubber Mfg. Co. (The), c. Warren and Church sts., N. Y.

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Rolls—Rubber Covered.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Car-Spring Co., 19 Pearl st., Boston, Mass.
Boston Rubber Co., 63 Franklin st., Boston, Mass.
Cleveland Rubber Co. (C. & P. & Nickle Plate R. R.), Cleveland, O.
Gutta-Percha & Rubber Mfg. Co., 35 Warren st., c. Church st., N. Y.
New York Belting & Packing Co., 15 Park Row, N. Y.
Revere Rubber Co., 63 Franklin st., Boston, Mass.

Rolling Mills.

Ætna Iron & Steel Co., Bridgeport, O.
Ætna Nut Co., Southington, Conn.
Ætna Iron & Steel Works, 161 La Salle st., Chicago, Ill.
Alabama Rolling Mill Co., Birmingham, Ala.
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Altoona Iron Co., Altoona, Pa.
Akron Iron Co., Akron, O.
American Wire Co., Cleveland, O.
American Sheet Iron Works, Phillipsburgh, N. J.
American Iron & Steel Works (Jones & Laughlins), (Ltd.), Pittsburgh, Pa.
Anchor Nail & Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Anchor Iron & Steel Works (L. M. Dayton), 94 W. 2d st., Cincinnati, O.
Anchor Brand Axle Works (Sheldon Axle Co.), Wilkes Barre, Pa.
Anniston Rolling Mill (Noble Bros. & Co.), Anniston, Ala.
Ausable Horse Nail Co., Keeseville, N. Y.
Aurora Iron Co., Aurora, Ind
Auburn Iron Works (C. W. Tuttle & Co.), Auburn, N. Y.
Apollo Sheet Iron Works (P. H. Laufman & Co.), (Ltd.), Apollo, Pa.
Apollo Rolling Mills (Apollo Iron & Steel Co.), Pittsburgh, Pa.
Arethusa Iron Works (Geo. W. Johnson), New Castle, Pa.
Baugh Steam Forge Co. 1 Newberry & McMillan Bldg., Detroit, Mich.
Bay State Iron Co., 12 Pearl st., Boston, Mass.
Beaver Falls Iron Co., Beaver Falls, Pa.
Beaver Falls Steel Works, Beaver Falls, Pa.
Bellaire Nail Works, Bellaire, O.
Belfont Iron Works Co., Ironton, O.
Bellefonte Iron & Nail Co. (Ltd.), Bellefonte, Pa.
Belleville Steel & Iron Nail Works, Belleville, Ill.
Belmont Nail Co., Wheeling, W. Va.
Benwood Iron Works, Wheeling, W. Va.
Berwick Rolling Mill (Jackson & Woodin Mfg. Co.), Berwick, Pa.
Bessemer Rolling Mills, Bessemer, Ala.
Bethlehem Iron Co., Bethlehem, Pa.
Birdsboro Nail Works (E. & G. Brooke Iron Co.), Birdsboro, Pa.
Birmingham Rolling Mill Co., Birmingham, Ala.
Black Diamond Steel Works (Park, Bro. & Co.), (Ltd.), Pittsburgh, Pa.
Blandon Rolling Mill Co., Blandon, Pa.
Boonton Iron Works, Boonton, N. J.
Boston Car Wheel Co., 1st and I sts., South Boston, Mass.
Braddock Wire Co., Pittsburgh, Pa.
Brandywine Rolling Mills (Worth Bros.), Coatesville, Pa.
Bridgewater Iron Co., Bridgewater, Mass.
Brierfield Rolling Mill (Brierfield Coal & Iron Co.), Brierfield, Ala.
Bridgeport Rolling Mill Co., Bridgeport, Conn.
Bristol Rolling Mill Co., Bristol, Pa.
Britton Iron & Steel Co., Cleveland, O.
Byers, A. M. & Co., Pittsburgh, Pa.
Burden Iron Co., Troy, N. Y.
Burgess, Chas., Titusville, Pa.
Burgess Steel & Iron Works, Portsmouth, O.
Cahoes Rolling Mill (Morrison, Colwell & Page), 253 River st., Troy, N. Y.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Cambridge Rolling Mills, Cambridgeport, M.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Canton Steel Works (Bolton Steel Co.), Canton, O.
Cannonsburgh Iron & Steel Co., Cannonsburgh, Pa.
Capital Iron Works, St. Paul, Minn.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Cartwright Iron & Steel Co., Steubenville, O.
Catasauqua Mfg. Co., Catasauqua, Pa.
Central Iron & Steel Co., Brazil, Ind.
Centralia Iron & Nail Works, Centralia, Ill.
Central Pacific Railroad Rolling Mill, Sacramento, Cal.
Central Iron Works, Harrisburg, Pa.
Champion Steel & Iron Works, Springfield, O.
Chartiers Iron & Steel Co. (Ltd.), Pittsburgh, Pa.
Chesapeake Nail Works (Chas. L. Bailey & Co.), Harrisburg, Pa.
Chester Rolling Mills, Thurlow, Pa.
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. 46.
Cherry Valley Iron Works, Leetonia, O.
Chicago Tyre & Spring Works, 94 Washington st., Chicago, Ill.
Chicago Crucible Steel Casting Co., 1326 Indiana av., Chicago, Ill.
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Chicago Splice Bar Mill (Morris, Sellers & Co.), 6 Ashland Blk., Chicago, Ill.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Chickies Rolling Co., Chickies, Pa.
Christiana Rolling Mill Co., Wilmington, Del.
Chrome Steel Works, Kent av. and Keap st., Brooklyn, N. Y.
Cleveland Hardware Co., Cleveland, O.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Coatesville Iron Works, Coatesville, Pa.
Cobb's Iron & Nail Co., Aurora, Ind.
Cold Spring Iron Works (Mitchell Bros.), Norwich, Conn.
Colorado Coal & Iron Co., South Pueblo, Col.
Collins Co., Collinsville, Conn.
Columbia Iron Co., Columbia, Pa.
Columbia Rolling Mill Co., Columbia, Pa.
Columbus Steel Works, Columbus, O.
Columbus Iron Works (P. Hayden, Saddlery Hardware Co.), Columbus, O.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Cooper, Reynolds & Co., Harrisburg, Pa.
Conshohocken, Pennsylvania & Corliss Iron Works (J. Wood & Bros. Co.), Conshohocken, Pa.
Crescent Steel Works (Miller, Metcalf & Parkin), Pittsburgh, Pa.
Crescent Nail Works (Standard Nail & Iron Co.), Williamsport, Pa.
Crescent Iron Works (Whitaker Iron Co.), Wheeling, W. Va.
Crown & Cumberland Steel Co., Pittsburgh, Pa.
Cumberland Rolling Mill, Mount Clare, Baltimore, Md.
Cumberland Nail & Iron Co., Bridgeton, N. J.; 43 N. Water st., Phila., Pa.
Dalmatia Nail & Iron Co., Dalmatia, Pa.
Danvers Iron Works (Arthur G. Tompkins & Co.), 10 Oliver st., Boston, Mass.
Danville Nail & Mfg. Co., Danville, Pa.
Delaware Iron Co., 222 S. 3d st., Phila., Pa.
Delaware Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.

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Delaware Rolling Mills (F. P. Howe), Phillipsburg, N. J.
Delaware Rolling Mills (Hughes & Patterson), Kensington st., Phila., Pa.
Detroit Steel & Spring Works, 1st and Larned sts., Detroit, Mich.
Diamond State Iron Co., Wilmington, Del.
Disston & Sons, Henry, Tacony st., Phila., Pa.
Douglassville Iron Co. (Ltd.), Douglassv'l, Pa.
Dover Iron Works, Dover, N. J.
Duncannon Iron Co., 122 Race st., Phila., Pa.
Eagle Iron Works (Curtins & Co.), Roland, Pa.
Eagle Rolling Mills & Tube Works (J. W. Friend & Co.), Pittsburgh, Pa.
East Chicago Steel Works (M. M. Towle), Hammond, Ind.
East Bridgewater Iron Co. (Rogers & Sheldon), 240 Congress st., Boston, Mass.
Easton Sheet Iron Works (Reilly & Oliver), Easton, Pa.
Edgar Thomson Steel Works (Carnegie Bros. & Co., Ltd.), 48 5th av., Pittsburgh, Pa.
Edge Moor Iron Co., Wilmington, Del.
Elba Iron & Bolt Co. (Ltd.), Pittsburgh, Pa.
Ellis & Lessig Steel & Iron Co. (Ltd.), Pottstown, Pa.
Elmira Iron & Steel Rolling Mill Co., Elmira, N. Y.
Enterprise Iron Works (Cartwright, McCurdy & Co.), Youngstown, O.
Etna Iron Works (Spang, Chalpant & Co.), 66 Sandusky st., Allegheny City, Pa.
Etna Iron Works (Ltd.), New Castle, Pa.
Eureka Cast Steel Co., 307 Walnut st., Philadelphia, Pa.
Eureka Iron & Steel Works, Wyandotte, Mich.
Ewald Iron Co., 941 N. 2d st., St. Louis, Mo.
Fair Hill Forge & Rolling Mill (Gaulbert, McFadden & Caskey), York, Pa.
Fairmount Steel Works (Alex. Foster & Co.), 2325 Spring Garden st., Philadelphia, Pa.
Falcon Iron & Nail Co., Niles, O.
Findlay Iron & Steel Co., Findlay, O.
Findlay La Grange Rolling Mills, Findlay, O.
Findlay Rolling Mill Co., Findlay, O.
Farist Steel Co., Bridgeport, Conn.
Fraconia Iron & Steel Works, Wareham, Mass.
Frankford Steel Co., Frankford st., Phila., Pa.
Franklin Iron Works (Geo. Youtz), Brickerville, Pa.
Fort Pitt Foundry (Mackintosh, Hemphill & Co.) (Ltd.), Pittsburgh, Pa.
Fort Pitt Iron & Steel Works (Corbon Iron Co.), Pittsburgh, Pa.
Fowler Rolling Mill Co., 185 Dearborn st., Chicago, Ill.
Fowler Steel Car Wheel Co., 185 Dearborn st., Chicago, Ill.
Gautier Steel Department of Cambria Iron Co., Johnstown, Pa. 2.
Glasgow Iron Works, Pottstown, Pa.
Glen Iron Works, Allentown Rolling Mill, Allentown, Pa.
Glendon Rolling Mill (Dilworth, Porter & Co., Ltd.), Pittsburgh, Pa.
Gibraltar Iron Works (Simon Seyfert & Co.), Reading, Pa.
Globe Nail Co., Station A, Boston, Mass.
Gray's Ferry Iron Works (Edward S. Buckley), 209 S. 3d st., Philadelphia, Pa.
Greencastle Iron & Nail Co., Greencastle, Ind.
Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Harrisburg Nail Works, Harrisburg, Pa.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Haxtun Steam Heater Co., Kewanee, Ill.
Heller & Bros., Newark, N. J.
Helmbacher Forge & Rolling Mill Co., St. Louis, Mo.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Hollidaysburg Iron & Nail Co., Hollidaysburg, Pa.
Hubbard Iron Co., Youngstown, O.
Hussey, Binus & Co. (Ltd.), Pittsburgh, Pa.
Hussey, Howe & Co. (Ltd.), Penn av. & 17th st., Pittsburgh, Pa.
Indianapolis Rolling Mill Co., Indianapolis, Ind.
Iowa Rolling Mill Co., Burlington, Ia.
Irondale Rolling Mill (Banfield & Co.), Irondale, O.
Ironton Rolling Mill (N. Y. & Ohio Iron & Steel Co.), Ironton, O.
Jackson Steel & Nail Mill Co., Jackson, O.
Jefferson Iron Works, Steubenville, O.
Jersey City Spike & Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Jersey City Steel Co., Jersey City, N. J.
Johnson, Isaac G. & Co., Spuyten Duyvil, N. Y.
Johnson Steel Street Rail Co., Johnstown, Pa. 55.
Joliet Steel Co., Home Ins. Bldg., Chicago, Ill.
Johnson, Reuben & Co., Northumberland, Pa.
Judson Mfg. Co., Oakland, Cal.
Junction Iron Co., Mingo Junction, O.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Juniata Rolling Mill (McLanahan, Smith & Co., Ltd.), Hollidaysburg, Pa.
Kansas City Bolt & Nut Works, Kansas City, Mo.
Kelly Nail & Iron Co., Ironton, O.
Kensington Iron Works (H. Lloyd, Son & Co.), Pittsburgh, Pa.
Kensington Iron & Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Keystone Horse Shoe Co., 17th & Clearfield sts., Phila., Pa.
Keystone Iron Works (Ltd.), Reading, Pa.
Keystone Rolling Mill Co. (Ltd.), Pittsburgh, Pa.
Kimberly, P. L. & Co., Sharon, Pa.
Kinsley Iron & Machine Works, Canton, Mass.
Kittanning Iron Co. (Ltd.), Kittanning, Pa.
Knoxville Iron Co., Knoxville, Tenn.
La Belle Iron Works, Wheeling, W. Va.
La Belle Steel Works (Smith Bros. & Co.), Pittsburgh, Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Lackawanna Iron & Coal Co., Scranton, Pa.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, Ohio.
Laramie Rolling Mill (F. E. Scrymser), Laramie City, W. T.
Laughlin Nail Co., Wheeling, W. Va.
Laughlin & Junction Steel Co., Wheeling, W. Va.
Laurel Iron Works, Coatesville, Pa.
Lawrence Iron & Steel Co., Ironton, O.
Lebanon Iron Co., Lebanon, Pa.
Lebanon Rolling Mills (Samuel E. Light), Lebanon, Pa.
Leechburgh Iron Works (Kirkpatrick & Co., Ltd.), Leechburgh, Pa.
Lewisburgh Nail Works, Lewisburgh, Pa.
Lickdale Iron Co., Lebanon, Pa.
Licking Iron Works (Licking Rolling Mill Co.), Covington, Ky.
Liggett Spring & Axle Co. (Ltd.), Pittsburgh, Pa.
Little Schuylkill Rolling Mill, Port Clinton, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Lock Haven Nail Co., Lock Haven, Pa.
Locust Point Iron & Steel Works (Coates & Co.), Baltimore, Md.
Logan Iron & Steel Co., 218 S. 4th st., Phila., Pa.
Longmead Iron Works (Jawood Lukens), Conshohocken, Pa.
Lookout Iron Co., Chattanooga, Tenn.
Lukens Rolling Mills (Chas. Huston & Sons), Coatesville, Pa.
McCormick & Co., Harrisburg, Pa.
McCullough Iron Co., Northeast, Elkton & Rowlandville, Md.

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McIlvain, Wm. & Sons, Reading, Pa.
McKeesport Iron Works (W. D. Wood & Co., Ltd.), 111 Water st., Pittsburgh, Pa.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Mahoning Rolling Mill Co., 330 Walnut st., Phila., Pa.
Manhattan Rolling Mill (John Leonard), 451 West st., N. Y.
Marshallton Iron Works (John R. Bringhurst), Marshallton, Del.
Massillon Rolling Mill (Jos. Corns & Son), Massillon, O.
Maumee Rolling Mill Co., Toledo, O.
Middleport Steel & Nail Works (King, Gilbert & Warner), Columbus, O.
Middlesex Rolling Mill (C. M. Raymond), West Middlesex, Pa.
Midvale Steel Co., Nicetown, Phila., Pa.
Milesburg Iron Works (McCoy & Linn), Milesburg, Pa.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Milton Mfg. Co., Milton, Pa.
Milton Nail Works (Godcharles & Co.), Milton, Pa.
Milton Rolling Mill & Steam Forge (Milton Iron Co.), Milton, Pa.
Monhagen Steel Works (Wheeler, Madden & Clemson Mfg. Co.), Middletown, N. Y.
Montour Iron & Steel Co., Danville, Pa.
Mount Hope Iron Works, Somerset, Mass.
Moundsville Rolling Mill, Moundsville, W. Va.
Minquas Iron Works (McCullough Iron Co.), Wilmington, Del.
Mitchell, Tranter & Co., 2 Elm st., Cincinnati, Ohio.
Myers, H. M. & Co. (Ltd.), Beaver Falls, Pa.
H. P. Nail Co., Cleveland, O.
National Tube Works Co., McKeesport, Pa.
Nashua Iron & Steel Co., Nashua, N. H. 56.
Nashville Iron Co., Nashville, Tenn.
Nelles's Agricultural Works (A. J. Nelles Co.), Pittsburgh, Pa.
New Phila. Iron & Steel Co., New Phila., O.
New Albany Forge & Rolling Mill Co., New Albany, Ind.
New Albany Rail Mill Co., New Albany, Ind.
Newark Steel Works (Benj. Atha & Co.), Newark, N. J.
New Haven Rolling Mill Co., New Haven, Conn.
Newport Rolling Mills (Marshall Iron Co.), Newport, Del.
Niles Rolling Mill (Coleman, Shields & Co.), Niles, O.
North Branch Steel Co., Danville, Pa.
Norristown Iron Works (James Hooven & Son), Norristown, Pa.
Northumberland Iron & Nail Works (Van Alen & Co.), Northumberland, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Norton Iron Works, Ashland, Ky.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Ohio Falls Iron Works, New Albany, Ind.
Old Colony Iron Co., Taunton, Mass.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Oliver & Roberts Wire Co. (Ltd.), Pittsburgh, Pa.
Onondaga Steel Works (Sweet's Mfg. Co.), Syracuse, N. Y.
Osborne, D. M. & Co., Auburn, N. Y.
Otis Iron & Steel Co., Cleveland, O.
Oxford Iron & Steel Works (Wm. & Harvey Rowland), Frankford st., Phila., Pa.
Oxford Iron & Nail Co., Oxford, N. J.; 52 Wall st., N. Y.
Pacific Iron & Nail Co., 9 Beale st., San Francisco, Cal.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Parkesburg Iron Works, Parkesburg, Pa.
Passaic Rolling Mill Co., Paterson, N. J.; 45 B'way, N. Y.
Paterson Iron Co., Paterson, N. J.
Paxton Rolling Mills, Harrisburg, Pa.
Pennsylvania Bolt & Nut Co., Lebanon, Pa.
Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.
Pennsylvania Iron Co., Lancaster, Pa.
Pennsylvania Iron & Steel Works (W. J. Hammond & Sons, Ltd.), Pittsburgh, Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. viii.
Penn Treaty Iron Works (Marshall Bros. & Co.), 24 Girard av., Phila., Pa.
Philadelphia Rolling Mill (S. Robbins & Son), Kensington st., Phila., Pa.
Philadelphia & Reading Coal & Iron Co., Reading, Pa.
Phœnix Horse Shoe Co., Poughkeepsie, N.Y.; 20 Reade st., N. Y.
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pine Iron Works (Jos. L. Bailey & Son), Pine Iron Works P. O., Pa.
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.
Pittsburgh Steel Casting Co., 26th & Railroad sts., Pittsburgh, Pa.
Pittsburgh Steel Works (Anderson, Du Puy & Co.), 107 Wood st., Pittsburgh, Pa.
Plano Steel Works (McDowell Mfg. Co.), Plano, Ill.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Pomeroy Iron & Steel Co., Pomeroy, O.
Pompton Steel & Iron Co., Pompton, N. J.
Portage Iron Co. (Ltd.), Duncansville, Pa.
Port Carbon Iron Works, Phila. & Reading Coal & Iron Co., 227 S. 4th st., Phila., Pa.
Portland Rolling Mill, Portland, Me.
Pottsgrove Iron Works, Potts Bros, Iron Co. (Ltd.), Pottstown, Pa.
Pottstown Iron Co., Pottstown, Pa.
Pottsville Rolling Mills, Pottsville Iron & Steel Co., Pottsville, Pa.
Powerville Iron Works, Boonton, N. J.
Pullman Iron & Steel Co., Pullman, Ill.; Pullman Building, Chicago, Ill.
Reading Bolt & Nut Works (J. H. Sternberg & Son), Reading, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Reed Bros. Rolling Mill & Tack & Nail Works (D. L. & F. S. Reed), Brockton, Mass.
Reeves Iron Co., Canal Dover, O.
Republic Iron Works, 1st av. & Smithfield st., Pittsburgh, Pa.
Rhode Island Horse Shoe Co., Providence, R. I.
Riverside Iron Works, Wheeling, W. Va.
Riverside Iron & Steel Co., Cincinnati, O.
Roane Iron Co., Chattanooga, Tenn.
Robinson Iron Co., Plymouth, Mass.
Rockaway Direct Process Iron & Steel Co., 32 Warren st., N. Y.
Rock Island Arsenal, Rock Island, Ill.
Roebling Sons Co., John A., Trenton, N. J.; 117 Liberty st., N. Y. 8.
Rome Merchant Iron Mill, Rome, N. Y.
Russia Sheet Iron Mills (Falcon Iron & Nail Co.), Niles, O.
Sable Iron Works (J. & J. Rogers Iron Co.), Ausable Forks, N. Y.
Sable Iron & Nail Works (Zug & Co.) (Ltd.), Pittsburgh, Pa.
Safe Harbor Rolling Mill, Phœnix Iron Co., 410 Walnut st., Philadelphia, Pa.
St. Louis Stamping Co., Cass av. & 2d st., St. Louis, Mo.
St. Louis Steam Forge & Rolling Mills (A. McDonald & Bros.), St. Louis, Mo.
Sanderson Bros. Steel Co., Syracuse, N. Y.
Schuylkill Haven Rolling Mill, Pottsv'le, Pa.
Schuylkill Iron Works (Allen Wood Co.), 519 Arch st., Philadelphia, Pa.
Schulte, Nehring & Co., Evansville, Ind.
Scranton Steel Co., Scranton, Pa.
Scottdale Iron Works, Scottdale, Pa.
Seyfert Rolling Mill (Samuel R. Seyfert), Reading, Pa.
Sharon Iron Co., Sharon, Pa.

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Sharon Steel Casting Co., Sharon, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. 3.
Soho Iron Mills (Moorhead, McCleane Co.), Pittsburgh, Pa.
Solar Iron & Steel Works (William Clark's Son & Co.), Pittsburgh, Pa.
Solid Steel Co., Alliance, O.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
South Tredegar Iron Co., St. Louis, Mo.
Spaulding Iron Co., Brilliant, O.
Spang Steel & Iron Co. (Ltd.), Pittsburgh, Pa.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Spuyten Duyvil Rolling Mill (Welch & Barnum), 11 Pine st., N. Y.
Standard Rolling Mill (Strothman Bros.), Minneapolis, Minn.
Standard Steel Casting Co., Thurlow, Pa.
Standard Iron Co., Bridgeport, O.
Standard Iron Co. (Ltd.), Norristown, Pa.
Standard Steel Works, 220 S. 4th st., Phila., Pa.
Star Iron Works (Bowen & Signor), Saranac, N. Y.
Star Iron Works (Lindsay & McCutcheon), Allegheny City, Pa.
Sterling Steel Co. (Ltd.), 208 Wood st., Pittsburgh, Pa.
Stewart Iron Co. (Ltd.), Sharon, Pa.
Sligo Rolling Mills (Phillips, Nimick & Co.), Pittsburgh, Pa.
Stirling Chain & Mfg. Co., Cuyahoga Falls, Ohio.
Stony Creek Iron Co. (Ltd.), Norristown, Pa.
Summers Iron Works (Summers Bros. & Co.), Struthers, O.
Sunbury Nail, Bar & Guide Iron Mfg. Co., Sunbury, Pa.
Susquehanna Iron Co., Columbia, Pa.
Syracuse Iron Works, Syracuse, N. Y.
Syracuse Steel Foundry Co., Syracuse, N. Y.
Swiff's Iron & Steel Works, Newport, Ky.
Terre Haute Iron & Nail Works, Terre Haute, Ind.
Thames Iron Works, Norwich, Conn.
Thorndale Iron Works Co., Thorndale, Pa.
Tidewater Steel Works (Combination Steel & Iron Co.), Chester, Pa.
Tonawanda Nail Works (R. A. Bostley & Co.), Tonawanda, Pa.
Top Mill (Wheeling Iron & Nail Co.), Wheeling, W. Va.
Tredegar Iron Works, (Tredegar Co.), Richmond, Va.
Tremont Nail Co., West Wareham, Mass.
Trenton Iron Works (New Jersey Steel & Iron Co.), Trenton, N. J.
Troy Steel & Iron Co., Troy, N. Y.; 26 B'way, N. J.
Thumbull, Iron Co., Girard, O.
Tudor Iron Works, 3d and St. Charles sts., St. Louis, Mo.
Tyrone Iron Co., Tyrone, Pa.
Ulster Iron Works (Wm. Mulligan), Saugerties, N. Y.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Union Steel Co., 302 1st Nat. Bank Bldg., Chicago, Ill.
Union Steel Nail Co., Omaha, Neb.
U. S. Iron & Tin Co. (Ltd.), Demmler, P. O., near McKeesport, Pa.
Valentine Ore Land Assn., Bellefonte, Pa.
Valley Iron Works (C. E. Pennock & Co.), Coatesville, Pa.
Vesuvius Iron & Nail Works (Moorhead Bro. & Co.), Pittsburgh, Pa.
Virginia Nail & Iron Works Co., Lynchburgh, Va.
Vulcan Forge & Iron Works (Long & Co.), Pittsburgh, Pa.
Vulcan Iron Co., Richmond, Va.
Vulcan Works (Western Steel Co.), St. Louis, Mo.
Wabash Iron Co., Terre Haute, Ind.
Wareham Nail Co., South Wareham, Mass.
Warren Rolling Mill, Warren, O.
Washburn & Moen Mfg. Co., Worcester, Mass.
Washburn Car Wheel Co., Hartford, Conn.
Watsontown Nail Works, Watsontown, Pa.
Wayne Iron & Steel Works (Brown & Co.), Pittsburgh, Pa.
Wellston Steel & Nail Mill Co., Wellston, O.
Wellsville Plate & Sheet Iron Co., Wellsville, Ohio.
West Bergen Steel Works (Spaulding, Jennings & Co.), Jersey City, N. J.
Western Iron Co., Rosedale, Kas.
West Lebanon Rolling Mill Co., Lebanon, Pa.
Westerman Rolling Mill (Westerman & Co.), Lockport, N. Y.
Western Nail Co., Belleville, Ill.
Western Steel Co., 58 Dearborn st., Chicago, Ill.
West Penn Steel Works (Jennings, Beale & Co., Ltd.), 43 6th av., Pittsburgh, Pa.
Wheatland Iron Co., Wheatland, Pa.
Wheeling Steel Works, Wheeling, W. Va.
Williamsport Iron & Nail Works, Williamsport, Pa.
Wilmington Rolling Mills (Seidel & Hastings Co.), Wilmington, Del.
Winch's Rolling Mill, Spike & Bolt Works, Phila., Pa.
Windsor Locks Steel Co., Bridgeport, Conn.
Wood, Wm. W., Wood's Falls, N. Y.
Worcester Steel Works, Worcester, Mass.
York Rolling Mill (Schall, Steacy & Denney), York, Pa.
Youngstown Steel Co., Youngstown, O.
Youngstown Rolling Mill Co., Youngstown, O.
Zanesville Iron Works (Ohio Iron Co.), Zanesville, O.

Rolling Mills—Equipment and Supplies.

Harris, T., William & Co., 46 Broadway, N. Y. 79.

Rolling Mills—Brass.

Benedict & Burnham Mfg. Co., Waterbury Conn.
Plume & Atwood Mfg. Co., Waterbury, Conn.

Rolling Stock and Car Trust Co.'s.

Adams, Oliver, 32 Liberty st., N. Y.
Post, Martin & Co., 36 Pine st., N. Y.
U. S. Rolling Stock Co. (The), 35 Wall st., N. Y.

Rolling Stock—Second Hand.

Heyn, Alfred, 47 Broadway, N. Y.
Innes, Thos. B. & Co., 115 Broadway, N. Y.
Jordan, F., 200 Broadway, N. Y.

Roofing—(Car) Asphalt.

Drake & Wiers, Cleveland, O

Roofs—Glass.

Reudle, Arthur E., 44 Broadway, N. Y.; 423 Walnut st., Phila., Pa.

Roofing—Granite.

Pennsylvania Mfg., Mining & Supply Co., 1006 Penn av., Pittsburgh, Pa.

Roofing—Gutta-Percha.

Empire Paint & Roofing Co., 1130 Race, st., Phila., Pa.

Roofing—Iron.

Anglo American Iron Roofing Co., 708 Penn av., Pittsburgh, Pa.
Armitage, John, Richmond, Va.
Bartlett, Hayward & Co., Baltimore, Md.
Beaver Falls Iron Co., Beaver Falls, Pa.
Berger Iron Roofing Co., Canton, O.

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Berlin Iron Bridge Co., East Berlin, Conn.; Binghamton, N. Y.
Bingham, S. H., 50 Dearborn st., Chicago, Ill.
Birmingham Bridge Co., Birmingham, Ala.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Bouton Foundry Co., Chicago, Ill.
Caldwell & Co., 130 W. 2d st., Cincinnati, O.
Cambridge Iron Roofing Co., Cambridge, O.
Canton Iron Roofing Co., Canton, O.
Cartter, M. S. & Co., B'way & Locust st., St. Louis, Mo.
Carroll, D. W. C. (Ltd.), Liberty & 3d avs., Pittsburgh, Pa.
Clark Bridge Co., 7 South st., Balto, Md.
Cincinnati Corrugating Co., Eggleston av., ab. 6th st., Cincinnati, O.
Columbia Bridge Co., Louis st., Dayton, O.
Connor, Charles H., Clay, c. Franklin st., Louisville, Ky.
Continental Iron Works, Brooklyn, N. Y.
Cooper, Hewitt & Co., 17 Burling Slip, N. Y.
Davis & Farnum Mfg. Co., Waltham, Mass.
Delaware Bridge Co., Trenton, N. J.
Dillon, Folwell & Co., 118 Market st., Phila., Pa.
Edge Moor Iron Co., Wilmington, Del.; 1600 Hamilton st., Phila., Pa.
Ehret, Jr., M. & Co., Phila., Pa.
Essex Iron Works, 53-57 N. J. R. R. av., Newark, N. J.
Gallagher, D. F. & Co., 223 Commercial st., Boston, Mass.
Garry Iron Roofing Co., 158 Merwin st., Cleveland, O.
Globe Iron Roofing & Corrugating Co., Cincinnati, O.
Gotleib, A. & Co., Major Block, Chicago, Ill.
Halton Iron Roofing Co., New Lisbon, O.
Hudson Bridge Works, Hudson, N. Y.
Hyndman, W. G. & Co., 52 E. 2d st., Cincinnati, O.
Iron City Bridge Works, 2007 Carson st., Pittsburgh, Pa.
Keeley, O. S. & Co., Indianapolis, Ind.
Kerr Murray Mfg. Co., Fort Wayne, Ind.
King Iron Bridge & Mfg. Co., Cleveland, O.
Knisely, Richard & Son, 184 S. Jefferson, st., Chicago, Ill.
Knisely & Miller Bros., 129 S. Clinton st., Chicago, Ill.
Lappan, James & Co., 20th st., n. Penn av., Pittsburgh, Pa.
Lloyd Iron Roofing & Paint Co., 56 W. Lake st., Chicago, Ill.
Massillon Bridge Co., Massillon, O.
Meaker & Bros., 412 and 425 S. 6th st., St. Louis, Mo.
Milwaukee Bridge & Iron Works, 17th & Fowler sts., Milwaukee, Wis.
Missouri Iron Roofing & Corrugating Co., 1501 S. 2d st., St. Louis, Mo.
Morris, L. M., 23d st. & Liberty av., Pittsburgh, Pa.
Moseley Iron Bridge & Roof Co., 5 Dey st., N. Y.
N. Y. Iron Roofing & Corrugating Co., 115 B'way, N. Y.
Northrup, A. & Co., S. 23d & Mary sts., Pittsburgh, Pa.
Passaic Rolling Mills Co., 45 B'way, N. Y.
Porter Iron Roofing Co., 101 W. Front st., Cincinnati, O.
Phœnix Bridge Co., 410 Walnut st., Phila., Pa.; 49 William st., N. Y.
Phœnixville Bridge Works, 49 William st., N. Y.; 410 Walnut st., Phila., Pa.; Phœnixville, Pa.
Rasner & Dinger, 101-103 Market st., c. 1st av., Pittsburgh, Pa.
Riter & Conley, 55 Water st., Pittsburgh, Pa.
Rochester Bridge & Iron Works, Rochester, N. Y.
Sagendorph Iron Roofing & Corrugating Co., St. Louis, Mo.; Cincinnati, O.
Sagendorph Roofing & Paint Co. (The), 14-16 E. 2d st., Cincinnati, O.
Scaife, Wm. B. & Sons, 119 1st av., Pittsburgh, Pa.
Schreiber, A. E. & Co., 140 N. Desplaines st., Chicago, Ill.
Scott & Co., Cincinnati, O.
Scribner Roofing & Cornice Co., 6th & Sibley sts., St. Paul, Minn.
Shiffler Bridge Works, Pittsburgh, Pa.
Snyder, T. C. & Co., Canton, O.
Sullivan & Ehlers, 166 B'way, Albany, N. Y.
Sykes Iron Roofing Co., Niles, O.
Stacey Mfg. Co., Cincinnati, O.
Standard Iron Co., Bridgeport, O.
Thompson Mfg. Co., Cleveland, O.
Union Bridge Co., 1 B'way, N. Y.
Van Noorden, E. & Co., 383-387 Harrison av., Boston, Mass.
Walton, J. P. & Co., Culvert, c. Harrison st., Cincinnati, O.
Wood, R. D. & Co., 400 Chestnut st., Phila., Pa.
Wrought Iron Bridge Co., Canton, O.

Roofing Materials.

Baltimore Coal Tar & Mfg. Co, 16 W. Camden st., Baltimore, Md.
Coddington, T. B. & Co., 27 Cliff st., N. Y.
Curtess, Dunton & Andrews, Grand Rapids, Mich.
Ehret, M., Jr. & Co., Phila. & Chicago.
Ehret, Warren Mfg. Co., St. Louis & Kansas City, Mo.

Roofing—Metallic.

Canton Iron Roofing, Canton, O.
Cartright Metal Roofing Co., Phila., Pa.
Cincinnati Corrugating Co., Eggleston av., ab. 6th st., Cincinnati, O.
Metallic Roofing Co. of Canada (Ltd.), Toronto, Ont.

Roofing Plates.

Cartright Metal Roofing Co., Broad & Race sts., Phila., Pa.; 122 La Salle st., Chicago, Ill.
Coddington, T. B. & Co., 27 Cliff st., N. Y.
Merchant & Co., 9 Burling sl,. N. Y.; 317 Arch st., Phila., Pa.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Potts, W. F. & Son, Phila., Pa.

Roofing—Rubber.

Indiana Paint & Roofing Co., 143 Duane st., N. Y.

Roofing—Steel.

Canton Iron Roofing Co., Canton, O.
Cambridge Roofing Co., Cambridge, O.

*Rope—Copper Wire.

Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.

Rope—Cotton and Mops.

Daud's, John, Sons, 59 Murray st, N. Y.
Darrow, A. R., New London, Conn.
Hodson, John M., M'yk, Phila., Pa.
Nawrath, J. P. & Co., 2 Lispenard st., N. Y.
Palmer, R. T. & Co., New London, Conn.
Small, E. H., Fall River, Mass.
Toledo Cotton Mill Co. (The), Toledo, O.

*Rope—Hoisting.

Claffy, John, 48 Dey st., N. Y. 91.

*Rope—Paper.

McCready Bag & Paper Co., 502 Commerce st., Phila., Pa.

Rope—Phosphor-Bronze.

Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.

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Rope—Railroad Switch.

Broderick & Bascom Rope Co., 794 N. Main st., St. Louis, Mo.
Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.

Rope—Tiller.

Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.

*Rope—Wrecking Car.

Elizabethport Steam Cordage Co., 46 South st., N. Y. **20.**

Rubber Treads and Step Plates.

Akron Rubber Co., Akron, O.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**
Rubber Step Mfg. Co., 43 Haverhill st., Boston, Mass.
Star Rubber Co., Trenton, N. J.

*Rudder Supporters.

American Ship Windlass Co., Providence, R.I. **xii.**

Safes.

Alpine Safe Co., 160 West Court st., Cincinnati, O.
Barnes Safe & Lock Co., 129 3d av., Pittsburgh, Pa.
Bart, D. G., Flint, Mich.
Baxter, P. W., Providence, R.I.
Beard & Bro. Safe & Lock Co., 918 n. 2d st., St. Louis, Mo.
Boyer, Peter & Co., Omaha, Neb.
Briggs, M. & Son, 282 State st., Rochester, N. Y.
Butler, Wm. H., 79 Duane st., N. Y.
Cary, H. D. & Son, 22 W. Eagle st., Buffalo, N. Y.
Chabot & Lorentzen, 1 Bowker st., Boston, Mass.
Chicago Safe & Lock Co., 209 S. Canal st., Chicago, Ill.
Chicago Scale Co., 147-151 S. Jefferson st., Chicago, Ill.
Cincinnati Safe & Lock Co., 43 Elm st., Cincinnati, O.
Corliss Safe Mfg. Co., 158 Cove st., Providence, R. I.
Damon Safe & Iron Works Co. (The), 17 Main st., Cambridgeport, Mass.
Davis, W. G. & R. E., St. Johns, Mich.
Detroit Safe Co., 67 Fort E., Detroit, Mich.
Diebold Safe & Lock Co., 79 Duane st., N. Y.; Canton, O.; 152 5th av., Pittsburgh, Pa.
Farrell & Co., 631 Chestnut st., Phila., Pa.
Fritter, J. A. & Co., Baltimore, Md.
Greenhood, J. & Co., 84 Dearborn st., Chicago, Ill.
Halliday, F. & Co., 18 n. 3d st., St. Louis, Mo.
Halliday, G. V., 142 Gravier st., New Orleans, La.
Hall's Safe & Lock Co., 279 B'way, N. Y.
Harris, Samuel P., 103 W. Monroe st., Chicago, Ill.
Hassenforder, Charles, Jr., 219 n. 4th st., Phila., Pa.
Heiser, W., Buffalo, N. Y.
Herring & Co., 251-252 B'way, N. Y. **38 & 39.**
Jacobson, Peter, 2018 Logan st., Louisville, Ky.
Jones, George H. Sons, Buffalo, N. Y.
Kansas City Safe and Iron Works, Kansas City, Mo.
Koestler, X., Milwaukee, Wis.
Lanse, Peter, 26-32 Freeman av., Cincinnati, O.
Lucas, Adam, Peoria, Ill.
Macneale & Urban, 182 W. Pearl st., Cincinnati, O.
Magness-Calcite Fire-proof Co., 64 Sudbury st., Boston, Mass.
Marvin Safe Co., 265 B'way, N. Y.
Miller, Luke H., 252 W. Baltimore st., Baltimore, Md.
Mittnacht, George M., 24 Spring st., N. Y.
Morris & Ireland, 64 Sudbury st., Boston, Mass.
Morse, E. R., Safe Co. (The), 78 Sudbury st., Boston, Mass.
Mosler, Bowen & Co., 768 B'way, N. Y.
Mossman, J. M., 101 Maiden Lane, N. Y.
Myers & Smith, 3029 Chestnut st., Phila., Pa.
National Safe & Lock Co., Cleveland, O.
Pittsburgh Safe & Lock Co., Madison & River avs., Allegheny, Pa.
Rieseck, G. & J., Pittsburgh, Pa.
Schreiber, S., Evansville, Ind.
Sneme, Charles, St. Louis, Mo.
Starr & Co., 410 N. 3d st., St. Louis, Mo.
Sullivan & Ehlers, 166 B'way, Albany, N.Y.
Taylor & Forbes, Holliday, c. Pleasant st., Baltimore, Md.
Terwilliger, J. M. & Co., 50 Maiden lane, N.Y.
Thompson & Co., 273 State st., New Haven, Conn.
Treyer, Wm., Rochester, N.Y.
Victor Safe Co., n. w. c. 13th & Walnut sts., Cincinnati, O.
Wuslanck, Theodore & Co., St. Louis, Mo.
York Safe & Lock Co., 14 Wood st., Pittsburgh, Pa

Sailmakers.

Acres, J. W., 45 S. Market st., Boston, Mass.
Adams, W. H., Eastport, Me.
Adams, J. H. & Sons, 74 Boston st., Baltimore, Md.
Allen & Stanwood, Gloucester, Mass.
Almy, J., New Bedford, Mass.
Atkins, P., Provincetown, Mass.
Austin, D. F. & Co., 29 Ohio st., Buffalo, N.Y.
Bailey & Humphries, Groton, Conn.
Baker, J. O., Eastport, Me.
Baker, G. O., 170 South st., N. Y.
Baker, Howard H. & Co., 18-26 Terrace st., Buffalo, N.Y.
Baker & Shay, 170 South st., N.Y.
Bangs, S., Provincetown, Mass.
Barberie, John, 77 South, st., N.Y.
Baxter, R. D., Provincetown, Mass.
Berry, B., Bangor, Me.
Berry, C., New London, Conn.
Berry, J. C., Camden, Me.
Berry & Smith, Bangor, Me.
Birnie, R. W., Wilmington, Del.
Blair, W., 153 West st., N.Y.
Blakiston, J. S., 6 Clay st., San Francisco, Cal.
Bloom & Co., 9-13 Woodward av., Detroit, Mich.
Bond, Jas. S. & Co., 114 Commercial st., Boston, Mass.
Bowen, R. S. & Co., 184 Hanover st., Baltimore, Md.
Bransan, Armitage & Co., Battery st., San Francisco, Cal.
Brennan & Curr, Sandusky, O.
Brockie, J. & Co., 1 City Dock, Newark, N.J.
Brooks, G. H., Ellsworth, Me.
Brooks, W. F., Lower Bridge, Bridgeport, Conn.
Brown & Murphy, 207 Smith's whf., Baltimore, Md.
Brush, A. J., 363 Rivington st., N.Y.
Butler, Benj., 61 Water st., Middletown, Conn.
Cahill, Jas. J., 26 East st., N.Y.
Campbell, W. A., Thomaston, Me.
Campbell & Hueston, 153 S. Water st., Providence, R.I.
Carpenter, Geo. B. & Co., 202-208 S. Water st., Chicago, Ill. **31.**
Channon, H., Co., 24 Market st., Chicago, Ill.
Chapman, J. H., New Bedford, Mass.
Chapman & Shurtleff, New Bedford, Mass.
Chase, Alonzo, 23 South st., N. Y.
Chase, J. L., 1022 S. 2d st., Philadelphia, Pa.
Chester, W., 102 Hudson st., Jersey City, N. J.

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Chicago Sail, Tent, Awning and Flag Mfg., Chicago, Ill.
Chrystal, Thomas, Essex, Conn.
Clare, Samuel, 2932 Brabant st., Phila., Pa.
Clark, T. S. & Son, 204 Dugan's whf., Baltimore, Md.
Clift, Isaac D., Mystic Bridge, Conn.
Connor, Monroe F., 38 South st., N. Y.
Cook, L., 2d., Provincetown, Mass.
Colby, S. V., Gloucester, Mass.
Cousens & Pratt 3 Commercial st., Boston, Mass.
Crandall, Charles H., Stonington, Conn.
Cumiskey, Daniel M., 20 Coenties sl., N. Y.
Cunningham, J. B., 847 Chapel st., New Haven, Conn.
Currier, C. O., Newburyport, Mass.
Currier & Hook, Bangor, Me.
Curtin, John, 98 West st., N. Y.
Cutler, A. M., 526 S. Delaware av., Phila., Pa.
Cutler, W. P. & Son, Bath, Me.
Davis, G., Fall River, Mass.
Davis, W., 516 Davis st., San Francisco, Cal.
Davis, W. A. & Son, Newburyport, Mass.
Dayle & O'Brien, 113 Davis st., San Francisco, Cal.
Dennett, G. W., Ellsworth, Me.
Dick, G. J. & T., 49 South st., N. Y.
Diggs, W. & Co., 113 Thames st., Balto., Md.
Diggs, W. B. & Co., 1731 Thames st., Balt., Md.
Donaldson, J. P. & Co., 22 Woodward av., Detroit, Mich.
Drown, C., Portsmouth, N. H.
Dunham, George B. & Co., 264 S. Water st., Chicago, Ill.
Dunn & Elliot, Thomaston, Me.
Dunning, R. & Son, Rockland, Me,
Dyer, C. H., Provincetown, Mass.
Elder, E. W., Bangor, Me.
Emerson, E. P., Bucksport, Me.
Erickson, A., 38 N. Market st., Boston, Mass.
Esteves, A., 134 N. Basin st., New Orleans, La.
Etheridge, B. E., 4 Vine st., Philadelphia, Pa.
Fales, T. J., 2 Planet st., Providence, R. I.
Farland, J. F., 219 Smith's whf., Balto., Md.
Farnsworth, A. S., Pembroke, Me.
Farrow, W., Rockland, Me.
Fauria, M. & Co., 8 N. Peters st., New Orleans, La.
Fears, G. L., Gloucester, Mass.
Fickett, M., Portland, Me.
Finney Bros., 228 S. Water st., Chicago, Ill.
Finney & Channon, 270 S. Water st., Chicago, Ill.
Fordham & Co., Greenport, N. Y.
Fowler, J. & J., Portland, Me.
Funk, C. C., 116 Clay st., San Francisco, Cal.
Gallagher, J., 131 River st., Cleveland, O.
Gay, T. S. & Co., Portsmouth, N. H.
Geran, G. W., 361 Fulton st., B'klyn, N. Y.
Gerdes, A. & Bro., 306 Julia st., New Orleans, La.
Gibbons, J. T., Blk. c. W. Falls av., Baltimore, Md.
Gifford, J. B., Fall River, Mass.
Gilbert, T., Marblehead, Mass.
Gill, John, 920 Otsego st., Phila., Pa.
Gjeston & Swinson, 210 S. Water st. (4th Floor), Chicago, Ill.
Glading, Henry, 140 Long Wharf, Newport, R. I.
Gladding, H. W., Ingraham's Wharf, Warren, R. I.
Godfrey & Mallay, 50 Clay st., San Francisco, Cal.
Goodwin, E. P., Newburyport, Mass.
Goold, W., Portland, Me.
Goss, J. C., 16 Woodward av., Detroit, Mich,
Graves, P. E., Marblehead, Mass.
Green, R., Oswego, N. Y.
Grover, J. W. & Son, 117 River st., Cleveland, O.
Halma, H. P., 26 N. Market st., Boston, Mass.
Hamblin, H., 296 State st., Boston, Mass.
Hammond, James, 399 West st., N. Y.
Hannum, C. A., Provincetown, Mass.
Harding, Braun & Prior, 56 Clay st., San Francisco, Cal.
Harding, W., 100 Hudson st., Jersey City, N. J.
Hart, Thos. M., New Bedford, Mass.
Hayden, Henry I., 107 South st., N. Y.
Hoyt, G. F. & Co., 28 N. Market st., Boston, Mass.
Hemmenway, Stephen, 39 & 60 South st., N. Y.
Hess, Lewis & Son, 308 S. Delaware, av., Phila., Pa.
Higgins, Jas. D., 89 West st., N. Y.
Hitch, E. E., New Bedford, Mass.
Hodges, C. H., Richmond, Me.
Hoffman S., Damariscotta, Me.
Hohm, M., 137 Union st., B'klyn, N. Y.
Hohorst, Frederick, 58 West st., N. Y.
Holway Bros. & Woodbury, 130 Commercial st., Boston, Mass.
Holly, David N., 167 Maiden Lane, N. Y.
Hooper, C. V. B., 336 Aliceanna st., Baltimore, Md
Hutchins, B. L., Calais, Me.
Hutchins, J., Calais, Me.
Hutchins, J., 91 Commercial st., Boston, Mass.
Hutchings & Bro., 36 South st., N. Y.
Hurt & Day, 52 South st., N. Y.
Hyer, W. D. S., 204 West st., N. Y.
Inglis, A., 119 River st., Cleveland, O.
Jackson, J. W. & Co., 247 Market st., Newark, N. J.
Jackson Sail & Awning Co., 247 Market st., Newark, N. J.
Jafferson, G. & Son, Charleston, S. C.
Jillson & Folsom, 34 S. Water st., Providence, R. I.
Johnson, J. C., Key West, Fla.
Johnston, W. G., Kingston (Rondout), N. Y.
Jordan, H. & Son, Charleston, S. C.
Joseph, John, 376 Water st., Bridgeport, Conn.
Keefe, John, 308 West st., N. Y.
Kenzel, W. H., 24 York st., Jersey City, N. J.
Kirk, Edwin R., 195 West st., N. Y.
Lamprell & Marble, 357 Commercial st., Boston, Mass.
Lane, E. B., Salem, Mass.
Lane & Jones, Wiscasset, Me.
Lawrence, C., 16 N. Del. av., Phila., Pa.
Lawrence, J. A., Tulip st., n. Washington av., Phila., Pa.
Leavitt, F. A., Portland, Me.
Leibsch, A. M., Salem, Mass.
Lewis, G. H., Provincetown, Mass.
Libby, D. H., Belfast, Me.
Lincoln, T. W., Quincy, Mass.
Lincoln & Allen, Portland, Me.
Ljokel, J. G. & Co., 252 S. Water st., Chicago, Ill.
Lockwood, H., 362 Water st., Bridgeport, Conn.
Lowe, J. M., Key West, Fla.
Lyon, W. J. & Co., 153 Market st., New rk, N. J.
McCallan, D. H., 62 Quay st., Albany, N. Y.
McCleery, R., Mobile, Ala.
McGee, W. & Son, Light st. Whf., Balto., Md.
McGinnis & Fitzgerald, 300 N. Delaware av. Phila., Pa.
McHugh, John F., 1250 B'way, N. Y.
McLauthlin, J. L. & R. H., 284 Com'l st., Boston, Mass.
McManus, J. H. & Son, 57 Commercial st., Boston, Mass.
Mac Kinney, W. E., 2051 Rush st., Phila., Pa.
Maguire & Co., 84 Light st. Wharf, Baltimore, Md.
Mair & Cranmer, 136 S. Delaware av., Phila., Pa.
Manhattan Awning & Cover Factory, 250 3d av., N. Y.
Martin, J. L., 42 South st., N. Y.
Mathers, A., Sandusky, O.
Matteson, J. M., Newport, R. I.
Matthews, G. & Co., 81 Commercial st., Boston, Mass.
Miller, J. C., 95 Camp st., New Orleans, La.
Miller, R. & Co., 230 State st., Boston Mass.
Mills, Andrew, 53 South st., N. Y.
Mills, R. & Sons, Northport, N. Y.
Mitchell, J. R., 425 E. Hughes st., Balto., Md.
Mitchell, V. & Co., 296 State st., Boston, Mass.
Mitchell, Z., Light st. Wharf, Balto., Md.

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Morgan, J. A. & Co., 7 Clay st., San Francisco, Cal.
Moore, Benjamin, 27 South st., N. Y.
Mugridge, S. T., Rockland, Me.
Munsey, S. C. & Co., Portland, Me.
Nelson, M., 292 State st., Boston, Mass.
Nelson, Severin M., 240 South st., N. Y.
N. Y. Sail Making Co., 27 Coenties sl., N. Y.
Nickerson, L., 6 Commercial st., Boston, Mass.
Noble, T., 17 Woodward av., Detroit, Mich.
North, G. B., 118 Light st. Wharf, Balt., Md.
Norton, D., Jr., 132 Broad st., Boston, Mass.
Nugent, Henry R., 67 South st., N. Y.
Oliver, J. F., Calais, Me.
Olsen, John, 146 Front st., N. Y.
Otis, Jos., 1 Central Wharf, Boston, Mass.
Padgett, J. & Co., Alexandria, Va.
Paine, F. A. & Co., Provincetown, Mass.
Palfray, B. C., 379 Commercial st., Boston, Mass.
Parker, R. H., 244 N. Delaware av., Phila., Pa.
Parrott, J. J., Mobile, Ala.
Patterson, Malcolm, 1 Central Wharf, Boston, Mass.
Payne, R. J., S. Water c. Crawford sts., Providence, R. I.
Perry, H. S., Rockland, Me.
Pearson, S. T. & Co., Bangor, Me.
Pease, L. F., 84 S. Water st., Providence, R. I.
Pettes, G. W., Provincetown, Mass.
Pinkham, E. & Co., 518 E. Pratt st., Baltimore, Md.
Porter, J. H., Pensacola, Fla.
Post Bros., 4 Lombard st., Phila., Pa.
Potter, Chas. W., 43 South st., N. Y.
Prince, S. N., 1 Commercial Wharf, Boston, Mass.
Prindall, C., Gloucester, Mass.
Provoost, D., Sons & Co., 58 Prime st., Buffalo, N. Y.
Provoost, S. A., 1 Commercial st., Buffalo, N.Y.
Reynolds, T., Market, c. Stewart sts., San Francisco, Cal.
Rightly, J. L., 1300 Beach st., Phila., Pa.
Robinson, Benj., 2 Washington st., S. Norwalk, Conn.
Robinson, W. & Co., 35 Commercial st., Boston, Mass.
Rogers, G. W., 89 Commercial st., Boston, M.
Rowe, E. L., Gloucester, Mass.
Rushton, J. H., Canton, N. Y.
St. George Sail Loft Co., St. George, Me.
Saule, C. H., 60 Commercial st., Boston, Mass.
Saunders, H. E., Machias, Me.
Sawyer, E. A., Portland, Me
Sawyer, J. M., 85 South st., N. Y.
Scott, J. E., 587 Michigan av., Detroit, Mich.
Scott, J. F., 10 Commercial Wharf, Newport, R. I.
Seabury, G. P., 97 Commercial st., Boston, M.
Sears, W. A., 7 South st., Troy, N. Y.
Shannon, Richard T., 116 N. Delaware, av., Phila., Pa.
Shea, J. J., 396 B'way, Albany, N. Y.
Silloway, J. E., 300 Commercial st., Boston, Mass.
Silsby, F. B., Bath, Me.
Simpson & Fisher, 34 Stewart st., San Francisco, Cal.
Skinner, J., Damariscotta, Me.
Smith, Geo. W., Gloucester, Mass.
Smith, J., 42 Franklin av., B'klyn, N. Y.
Smith, N. & Co., 28 South st., N. Y.
Soule, C. H., 60 Commercial st., Boston, Mass.
Spearing & Co., 36 Canal st., New Orleans, La.
Stafford, Jas., 27 Coenties Slip, N. Y.
Steele, I. A. S., Gloucester, Mass.
Sterry, A. N., Gloucester, Mass.; New London, Conn.
Stetson, B. F., Richmond, Me.
Stevens, C. W. & Son, 122 S. Delaware av., Phila., Pa.
Stinson, C. C., Camden, Me.
Stoneman, M. G. & Son, 55 Quay st., Albany, N.Y.
Saulane, G., 302 S. Delaware av., Phila., Pa.
Thombs & Osborn, Belfast, Me.
Thorp, Samuel & Co., 157 South st., N.Y.
Tibbitts, A. C., Rockland, Me.
Totman & Clifford, Bath, Me.
Tregoe, G. W., Smith's whf., Baltimore, Md.
Trimm, J. W., 3 Pearl st., Buffalo, N.Y.
Trundy & Bennett, 26 South st., N.Y.
Trundy & Co., 57 Broad st., Boston, Mass.
Upson, Walton & Co., 159 River st., N.Y.
Vanderherchen, Frank, 243 N. Water st., Phila., Pa.
Van Name & King, 205 Long whf., New Haven, Conn.
Waddy, W. H., 11th st. whf., Washington, D.C.
Waite, O. & Co., Portland, Me.
Wakefield, J., Burlington, Vt.
Wales, J. T., Damariscotta, Me.
Walter, J., 89 West st., N.Y.
Washburn, C. H., Thomaston, Me.
Watkins & Goessen, Galveston, Tex.
Wheeler & Gurney, 367 Atlantic av., Boston, Mass.
Whitney, V. G., 61 E. Main st., Bridgeport, Conn.
White & Co., Lynn, Mass.
Whittier, J. S., East Machias, Me.
Wilder, T. S., 32 South st., N.Y.
Wilder & Co., 512 S. Delaware av., Phila., Pa.
Wilders, Theodore S., 32 South st., N.Y.
Willie, J., Wilmington, Del.
Wilson, A., 440 Atlantic av., Boston, Mass.
Wilson, F. M., Port Jefferson, N.Y.
Wilson & Griffin, 115 South st., N. Y.
Wise, J. H. & Co., 308 E. Pratt st., Baltimore, Md.
Wood, W. C., 514 2d st., San Francisco, Cal.
York, S. S. & Son, Portland, Me.
Yale, R. M. & Co., 29 S. Market st., Boston, Mass.
Zuill, W. P., Fall River, Mass.

Sand Boxes.

Brill, J. G. Co., Phila., Pa.
Butler, W. T., Boston, Mass.
Car Track Friction Appliance Co. (The), 19 Tremont row, Boston, Mass.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st, Brooklyn, N.Y.
Jordan Mills Mfg. Co. (The), 32 Nassau st., N.Y.
Pugh & Russell, Stewart Bldg., N.Y.

Sand Dryers.

Jordan, F., 200 B'way, N.Y.

Sand—Moulding.

Emerick, J. A. & Co., 1056-1076 Beach st., Phila., Pa.
Gillinder & Bennett, Phila., Pa.
McIlvaine Bros., 15th & Hamilton sts, Phila., Pa.
New York Sand & Facing Co., 273 Cherry st., N.Y.
Obermayer, The S. Foundry Supply Mfg. Co., Cincinnati, O.
Ransom, E. D. & Co., Mulberry, c. Church st., Albany, N.Y.
Paxson, J. W. & Co., 1021 N. Delaware av., Phila., Pa.
Perkins, H. A., Stamford, Conn.

Sand Paper Mfrs. & Dealers.

Aubin, Geo., 217 Church st., Phila., Pa.
Austin & Eddy, 117-119 Broad st., Boston, Mass.
Baeder, Adamson & Co., 67 Beekman st., N.Y.; 730 Market st., Phila., Pa.; 182 Lake st., Chicago, Ill.
Baeder Flint Paper Co., 212 S. 3d st., Phila., Pa.; 12 E. 3d st., Cincinnati, O.
Baeder Glue Co. (The), 1-3 W. Pearl st., Cincinnati, O.

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Baeder, Wm. A., Glue Co. (The), 283 Pearl st., N. Y.
Barrett, M. L., 56 Wabash av., Chicago, Ill.
Barton, H. H., 222 Market st., Phila., Pa.
Bay State Flint Paper Co., Chester, Mass.
Behr, Herman & Co., 75 Beekman st., N. Y.; 19 High st., Boston, Mass.; 201 Randolph st., Chicago, Ill.
Berry & Place Machine Co., 12 California st., San Francisco, Cal.
Boston Flint Paper Co., 239 Franklin st., Boston, Mass.
Burns, Egbert R., 247 Pearl st., N. Y.
Buzzell, O. W., Lynn, Mass.
Coryell Flint Paper Co., Williamsport, Pa.
Dalton, M., 178 Prince st., N. Y.
Gage, J. P., Mfg. Co., 96 Bowery, N. Y.
Hewitts, C. B & Bros., 48 Beekman st., N. Y.
King, D., Webster & Co., 52 Wabash av., Chicago, Ill.; 166 High st., Boston, Mass.; 407 N. 3d st., St. Louis, Mo.
Pickett, J. H., 1723 Cairo st., Baltimore, Md.
Stratton, H. O., 159 Franklin st., Boston, Mass.
Tenney, Ben., Hallowell, Me.
Upton, Geo., 239-241 Franklin st., Boston, Mass.
Waddell, R. J. & Co., 52 Beekman st., N. Y.
Washburn, B. D., 151 Congress st., Boston, Mass.
Wiggins & Stevens, Malden, Mass.
Wislow & Co., 206 Lake st., Chicago, Ill.

Sanitary Goods.

Clow, Jas. B. & Son, 212 Lake st., Chicago, Ill.
Standard Mfg. Co., Pittsburgh, Pa.; 66 Centre st., N. Y.

Saw Arbors.

Dickson Mfg. Co., Scranton, Pa.
Harris, P. D., Shelbyville, Ind.
McIvers Bros. & Co., Worcester, Mass

Saw Guides—Band.

Atkins, E. C. & Co., Indianapolis, Ind.
Hill, Wm. E. & Co., Kalamazoo, Mich.
Kratzer, Wayne, Allentown, Pa.

*Saw Gummers.

Tanite Co. (The), Stroudsburg, Pa.

Saw Mfrs.

Adams, J., Wausau, Wis.
Albany Saw Works, Albany, N. Y.
Allen, B. & Co., 110 Tchoupitoulas st., New Orleans, La.
American Saw Co., 30 Water st., N. Y.; Trenton, N. J.; 21-23 Main st., San Francisco, Cal.
Amesbury, Jacob, 117 Elk st., Buffalo, N. Y.
Andrews Bros, Elmira, N. Y.
Andrews, E. C., Williamsport, Pa.
Andrews, M. L., Bridgewater, Mass.
Andrews, Wm. H., Big Rapids, Mich.
Armsheimer, Henry, 85 Nassau st., N. Y.
Atkins, E. C. & Co, Indianapolis, Ind.; Memphis, Tenn.
Atlanta Saw Works, Atlanta, Ga.
Bailey, L. J., 109 Beach st., Boston, Mass.
Baldbridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Barcus Bros., Muskegon, Mich.
Barnes, Anthony, 2227 Cedar st., Phila., Pa.
Barnes, W. F. & John Co., Rockford, Ill.
Barry, W. B., Saw & Supply Co., Indianapolis, Ind.
Bartley, H., Toledo, O.
Barton, S., Stillwater, Minn.
Batty & Broadhead, Manistee, Mich.
Belcher, W. H., 1738 Callowhill st., Phila., Pa.
Belgium Hericoidal Saw Co, 52 B'way, N. Y.
Bennett, E., Kokomo, Ind.
Blake & Johnson, Waterbury, Conn.
Bozard, B. S., 42 Milwaukee av., Chicago, Ill.
Boynton, E. M., 99 Chambers st., N. Y.
Boynton, L. D. & Co., Nashua, N. H.
Branch-Crookes Saw Co., 522 N. 3d st., St. Louis, Mo.
Braun Bros., 18th av., c. S. 19th st., Newark, N. J.
Bristol Saw Works, Bristol, Conn.
Bronson, Asa., 32 Fremont st., San Francisco, Cal.
Brown, H. C., f Uhler al., Balto., Md.
Brown, W., 222 Jackson st., San Francisco, Cal.
Bullock & Seagrave, 89 Alborn st., Providence, R. I.
Burrill & Dutton, 31 Beverly st., Boston, Mass.
Coler & Beck, 128 Water st., Pittsburgh, Pa.
Canton Saw Co., Canton, O.
Chattanooga Saw Works, Chattanooga, Tenn.
Chicago Saw & File Works, 273 S. Canal st., Chicago, Ill.
Cincinnati Saw Works, 213 W. 2d st., Cincinnati, O.
Clark, Wm. & Co., Pittsburgh, Pa.
Clemson Bros., Middletown, N. Y.
Clemson & Co., Woburn, Mass.
Cocker, William, Lockport, N. Y.
Conn, E. J., 641 Mission st., San Francisco, Cal.
Connell & Dengler, Mill & Furnace sts., Rochester, N. Y.
Connolly, J., 28 Walton st., Syracuse, N. Y.
Cuddy, William, 108 Hester st., N. Y.
Cunningham, E. E., Worcester, Mass.
Curtis & Co., 40 Franklin st., Chicago, Ill.
Curtis & Co. Mfg. Co., 813 N. 2d st., St. Louis, Mo.
Dearborn, C. C., Camden, Me.
Detroit Saw Works, 66 Fort st., Detroit, Mich.
Diamond Saw Co., 33 Chambers st., N.Y.; Bridgeport, Conn.
Disston, H. & Sons, Randolph, c. Market st., Chicago, Ill.; 850 W. Main st., Louisville, Ky.; 159 Franklin st., Boston, Mass.; Tacony st., Phila., Pa.
Donaldson, D., Rock Island, Ill.
Downie, D., 189 15th st., Denver, Col.
Egan Co. (The), Cincinnati, O.
Elwell, E. M., Springfield, Mass.
Emerson, C. M., Bay City, Mich.
Emerson, Smith & Co., Beaver Falls, Pa.
Empire Saw Works, St. Louis, Mo.
Everhart, T. J., Grand Rapids, Mich.
Eyre, Henry E., 135 Lewis st., N.Y.
Farley, T., 189 S. Meridian st., Indianapolis, Ind.
Field, J. A. & Co., St. Louis, Mo.
Fisherville Saw Co., Concord, N. H.
Flint, J., 18 Platt st, Rochester, N.Y.
Freund, F., Salem, Mass.
Geiger, Moore & Geiger, Ashley, Ill.
Gerlach, P. & Co., 51 Center st., Cleveland, O.
Gibbs, R. F., 644 Mission st, San Francisco, Cal
Goes, O. & Co., 41 S. Canal st., Chicago, Ill.
Grays, J. G., Medina, O.
Green Castle Foundry & Machine Co., Green Castle, Ind.
Griffin, G. W. & Co., Franklin Falls, N.H.
Griffiths, Albert, 40 Oliver st., Boston Mass.
Guildford, S. T., Glen Falls, N. Y.
Gustafson & Johnson, Milwaukee, Wis.
Hadley, Wright & Co., 113-125 S. Tennessee st., Indianapolis, Ind.
Harder, O. L., Green Bay, Wis.
Hattersley, Jonathan, 239 W. Pearl st., Cincinnati, O.
Hawkins Bros., 32 Fremont st., San Francisco, Cal.
Hayward, H. M., 36 Batterymarch st., Boston, Mass.
Hiles, C. A. & Co., 237 Lake st., Chicago, Ill.
Hoe, R. & Co., 54 Grand st., N. Y.
Hogland, Geo, Williamsport, Pa.
Holden, Edw. J., Port Jervis, N.Y.
Holmes, E. B., Buffalo, N. Y.
Hubbard, Bakewell & Co., Dinwiddie, c. Colwell st., Pittsburgh, Pa.
Hubbard & Co., 91 5th av., Pittsburgh, Pa.
Humason & Beckley Mfg. Co., New Britain, Conn.

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Huther Bros., 198 Mill st., Rochester, N.Y.
Johnson & Reeves, Minneapolis, Minn.
Kendall, P. A., Nashua, N. H.
Kennedy, R. M., 57 N. 7th st., Phila., Pa.
Keokuk Wind Engine Co., Keokuk, Ia.
Kerns, A. J., Norfolk, Va.
Kirbey, A. R., Milwaukee, Wis.
Kirmer, E., 408 Volkmar st., Phila., Pa.
Kochenrath, C. A., 311 E. Main st., Louisville, Ky.
Lang, H. & J., 41 Maiden Lane, N. Y.
Lansing & Co., Church, c. Bleecker sts., Albany, N. Y.
Latta, G. T., 48 Central av., Cincinnati, O.
Lauer, N., 28 Walton st., Syracuse, N. Y.
Lawson, L., 133 9th av., N. Y.
Lewis & Co., 411 E. 1st st., Dayton, O.
Linforth, A., 318 Jackson st., San Francisco, Cal.
Lippert, E. T., 626 Grant st., Pittsburgh, Pa.
Luce, J. R. & Co., Stevens Point, Wis.
McColgan, Thos., 63 Forsyth st., N. Y.
McCoy & Sanders, 26 Warren st., N. Y.
McDermott Bros., 556 W. 24th st., N. Y.
McGarity, B., 234 N. Front st., Baltimore, Md.
McNiece, W., 515 Cherry st., Phila., Pa.
MacClinchy, W. H., 158 Lewis st., N. Y.
Marion Saw Works, Marion, Ind.
Marston, J. M. & Co., 3 Appleton st., Boston, Mass.
Mertz, A., Toledo, O.
Michigan Saw Works, East Saginaw, Mich.
Montgomery & Co., 105 Fulton st., N. Y.
Moore Bros., Jamestown, N. Y.
Moore, F. D., Wilmington, Del.
Morris, E., 964 Grand st., New Haven, Conn.
Moss & Graham, 79 Centre st., N. Y.
Newhall, H. B. Co., 105 Chambers st., N. Y.
New Orleans Railway Supply & Mfg. Co., 98 Commons st., New Orleans, La.
Nicholls, J., 273 S. Canal st., Chicago, Ill.
Nicholls, H., 212 Pine st., Philadelphia, Pa.
Nicholson, W., 2212 Amber st., Phila., Pa.
Ohlen & Sons Saw Mfg. Co., c. Spring & Water sts., Columbus, O.
Oldham, Joshua, White, c. Elm sts., N. Y.
O'Rourke, M. L., 65 S. Water st., Cleveland, O.
Pacific Saw Mfg. Co., 17 Fremont st., San Francisco, Cal.
Parke & Lacy, 8 California st., San Francisco, Cal.
Patterson, John T., 283 Canton av., Baltimore, Md.
Parnell, W., 95 Beaver st., Albany, N. Y.
Peace, Harvey W. & Co., 189 10th st., B'klyn, N. Y.
Pearson, T., 42 N. Genesee st., Syracuse, N. Y.
Pearson, Thos., Oswego, N. Y.
Peckham, E. G., Toledo, O.
Penfield, E. O., Bristol, Conn.
Penn Saw Works, Pittsburgh, Pa.
Proctor, D. R., 144 La Salle st., Chicago, Ill.
Proctor Radical Planer Saw Co., 142 La Salle st., Chicago, Ill.
Providence Saw & Tool Works, 25 Calendar st., Providence, R. I.
Quinn, W. H. & Co., 99 Chambers st., N. Y.
Radcliffe & Rowe, 213 W. 2d st., Cincinnati, O.
Reed Bros., E. Nashville, Tenn.
Richardson Bros., 19 River st., Newark, N. J.
Ridgley, R. B., 42 Woodbridge st., Detroit, Mich.
Robinson, S., Evansville, Ind.
Ross, Jas., 41 W. Court st., Cincinnati, O.
Rowell Tubular Saw Co., Manchester, N. H.
Sandusky Saw & File Works, Sandusky, O.
Scagrave, W. K., rear 89 Aborn st., Providence, R. I.
Schwartz's, M., Sons, Bangor, Me.
Seneca Falls Mfg. Co. (The), Seneca Fall, N. Y.
Sheffield Saw Works, Indianapolis, Ind.
Simonds, John, 511 Mission st., San Francisco, Cal.
Simonds, Mfg. Co., Fitchburgh, Mass.; S. Canal, c. W. Washington st., Chicago, Ill.
Simpson, A., Utica, N. Y.
Simpson, J. C., 269 S. Desplaines st., Chicago, Ill.
Slack, W., 70 Walton st., Syracuse, N. Y.
Smith, Eugene, San Francisco, Cal.
Spaulding, N. W., 17 Fremont st., San Francisco, Cal.
Spaulding, N. W. & Bros., 20 S. Canal st., Chicago, Ill.
Starr, O. A., 18 Devonshire, Boston, Mass.
Stone, T. W., Columbus, O.
Stones, John C., Pittsburgh, Pa.
Strange's Cylinder Saw & Machine Co., Taunton, Mass.
Summers, C. J., 430 Front av., Buffalo, N. Y.
Swannie, J. W., 49 E. Market st., Buffalo, N. Y.
Swett, F. W., 69 S. Canal st., Chicago, Ill.
Taylor, A., Bangor, Me.
Tenney, C., Hardware Co. (The), 88 Chambers st., N. Y.
Terhune, E. L., 126 Worth st., N. Y.
Thompson, Henry G. & Sons, 51 Leonard st., N. Y.; New Haven, Conn.
Thurston, J., Columbus, O.
Tillinghast & Co., 108 Erie st., Toledo, O.
Tilton, E. W., Oshkosh, Wis.
Toland, J., & Son, 232 N. Front st., Baltimore, Md.
Trevor & Co., Lockport, N. Y.
Tucker, W. J., 3 Spear st., San Francisco, Cal.
Ulscht & Linn, 195 N. Water st., Rochester, N. Y.
Union Saw Co. (The), 337 B'way, N. Y.
Union Saw Works, 32 Fremont st., San Francisco, Cal.
Van Ness, Cornelius, 130 Mangin st., N. Y.
Ward, W., Bay City, Mich.
Webster, W. W. & Co., 3 Spear st., San Francisco, Cal.
Weeks, B. C., 811 S. Front st., Phila., Pa.
Welz, G. P., 162 Gratiot av., Detroit, Mich.
Wheeler, Madden & Clemson Mfg. Co., Middletown, N. Y.
Whitney, S. E., Plattsburgh, N. Y.
Williamson, T. E., 18 William st., Albany, N. Y.
Williamsport Saw Works, Williamsport, Pa.
Wilson, G. & Bro., Fort Wayne, Ind
Woodrough & Clemson, 220 Franklin st., Boston, Mass.
Woodrough & Mc Parlin, 6th, c. Hoadly sts., Cincinnati, O.
Worrall & Co., 28 Elm st., N. Y.
Young & Farrel Diamond Stone Sawing Co. (The), 138th st., c. 4th av., N. Y.; Polk, c. Beach sts., Chicago, Ill.

Saw Sets.

Atkins, E. C. & Co., Illinois, South and Eddy sts., Indianapolis, Ind.
Avery Elevator Bucket Co., Leonard & Winter sts., Cleveland, O.
Bemis & Call (Hardware & Tool Co.), Springfield, Mass.
Coxhead, John F., 22 Noxon st., Poughkeepsie, N. Y.
Cunningham, E. E., 23 Hudson st., Worcester, Mass.
Herrick, W., Northampton, Mass.
Johnson, Wm., Newark, N. J.
Morrill, Charles, 64 College Place, N. Y.
Smith, Seymour & Son, Oakville, Conn.
Stillman, E., Poland, N. Y.
Truax, Chauncey S., 64 College Place, N. Y.

Saws—Band.

Alexander, G. W., 207 Washington av., n. Minneapolis, Minn.
Allen Mfg. Co., Chicago, Ill.
Allis, Edward P. & Co., Milwaukee, Wis.
Atkins, E. C. & Co., 202 S. Illinois st., Indianapolis, Ind.; Memphis, Tenn.
Automatic Band Saw Co., Allentown, Pa.
Baldridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Barry, W. R., Saw & Supply Co., 139 S. Penn st., Indianapolis, Ind.; 328 Market st., Chattanooga, Tenn.

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Bass Foundry & Machine Works. Fort Wayne, Ind.
Bentel & Margedant Co., Hamilton, O.
Betts, I. F., 509 Shipley st., Wilmington, Del.
Buss Machine Works, Grand Rapids, Mich. **58.**
Clement, F. H., 121 Mill st., Rochester, N. Y.
Colladay, Jos. O. & Bro., 626 Race st., Phila., Pa.
Cordesman Machine Co., 1-10 Friendship st., Cincinnati, O.
Cordesman, Myer & Co., 167 W. 2d st., Cincinnati, O.
Cunningham, E. E., 23 Hudson st., Worcester, Mass.
Defiance Machine Works, Defiance, O.
Detroit Saw Works, 66 E. Fort st., Detroit, Mich.
Dietz, Woermann & Co., 58 Plum st., Cincinnati, O.
Disston, Henry, Phila.; Chicago; Louisville.
Egan Co. (The), 222-250 W. Front st., Cincinnati, O.
Emerson, Smith & Co., Beaver Falls, Pa.
Esplin, Chas., 623 Franklin av., Minneapolis, Minn.
Forsaith, S. C. & Co., Manchester, N. H.
Frank & Co., 176 Terrace st., Buffalo, N.Y.
Gail & Bumiller, 181 S. Clinton st., Chicago, Ill.
Getchell, J. S. & Son, Houlton, Me.
Hill, Wm. E. & Co., Kalamazoo, Mich.
Hoffman, J. R. & Co., Fort Wayne, Ind.
Houston, Levi, Montgomery, Ala.
James, Ohlen & Son's Saw Mfg. Co., Park & Spring sts., Columbus, O.
Lockyear, Geo. H., Minneapolis, Minn.
London, Berry & Orton, 22d & Arch sts., Phila., Pa.
McCoy & Sanders, 26 Warren st., N.Y.
Marston, J. M. & Co., 3 Appleton st., Boston, Mass.
Michels, J., Detroit, Mich.
Michigan Saw Co., East Saginaw, Mich.
Nichols, Wm. E. & Co., Baldwinsville, Mass.
North Star Iron Works, Minneapolis, Minn.
Oldham, Joshua, White, n. Elm st., N.Y.
Peace, Harvey W. Co. (Ltd.), 189 10th st., Brooklyn, N.Y.
Pennington Machine Works, Fort Wayne, Ind.
Phœnix Mfg. Co., Eau Claire, Wis.
Power, L. & Co., 12 S. 23d st., Phila., Pa.
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.
Pryibil, P., 467 W. 40th st., N.Y.
Radcliff, Rowe & Co., 43 Plum st., Cincinnati, Ohio.
Rogers, C. B. & Co., 109 Liberty st., N.Y.
Sebastian, May & Co., 177 W. 2d st., Cincinnati, O.
Simonds Mfg. Co., Fitchburg, Mass.; Chicago, Ill.
Smith, H. B., Machine Co., Smithville, N.J.
Stearns Mfg. Co., Erie, Pa.
Swett, Frank W., 69 S. Canal st., Chicago, Ill.
Vulcan Saw Works, Brooklyn, N.Y.
White, John A., 31 S. Main st., Concord, N.H.
Wilkin Mfg. Co., Milwaukee, Wis.
Williamsport Machine Co. (Ltd.), W. 3d & West sts., Williamsport, Pa.
Winsted Foundry & Machine Co. (The), West Winsted, Conn.
Woodward Machine Co., Lowell, Mass.

Saws—Circular.

American Saw Co, Trenton, N.J.
Atkins, E. C. & Co., Indianapolis, Ind.; Memphis, Tenn.
Baldridge & Hogan Saw Co., 7 Vine st., Cincinnati, O.
Barnes, W. F. & John, Co., Rockford, Ill, **49.**
Barry, W. B., Saw & Supply Co., 139 S. Penn st., Indianapolis, Ind.; 328 Market st., Chattanooga, Tenn.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Batty & Broadhead, Manistee, Mich.
Bentel & Margedant, Hamilton, O.
Chase Turbine Mfg. Co., Orange, Mass.
Cocker, W., Lockport, N. Y.
Colladay, Jos. O. & Bros., 626 Race st., Phila., Pa.
Cordesman Machine Co., 1-10 Friendship st., Cincinnati, O.
Cordesman, Meyer & Co., 167 W. 2d st., Cincinnati, O.
Curtis & Co., 811 N. 2d st., St Louis, Mo.
Dayton Saw Works, Dayton, O.
Detroit Saw Works, 66 Fort st., E, Detroit, Mich.
Egan Co. (The), 214 W. Front st., Cincinnati, Ohio.
Emerson, Smith & Co., Beaver Falls, Pa.
Faneuil Watch Tool Co., Boston, Mass.
Forsaith, S. C. & Co., Manchester, N. H.
Frank & Co., Buffalo, N. Y.
Gail & Bumiller, 181 S. Clinton st., Chicago, Ill.
Gerlach, Peter, & Co., Columbus & Winter sts., Cleveland, O.
Greist, Charles W., Erie, Pa.
Hill, Wm. E. & Co., Kalamazoo, Mich.
Hoe, R. & Co., 504 Grand st., N. Y.
James Ohlen & Sons, Saw Mfg. Co., Park & Spring sts., Columbus, O.
Lane Mfg. Co., Montpelier, Vt.
Marston, J. M. & Co., 3 Appleton st., Boston, Mass.
Michigan Saw Co., East Saginaw, Mich.
Narragansett Machine Co., 46 Sprague st., Providence, R. I.
North Star Iron Works, Minneapolis, Minn.
Oldham, Joshua, White, n. Elm st., N. Y.
Peace, Harvey & Co. (Ltd.), 189 10th st., Brooklyn, N. Y.
Perry Machine Co., 160 Portland st., Boston, Mass.
Powell, A. C. & Son, Syracuse, N. Y.
Power, L. & Co., 12 S. 23d st., Phila., Pa.
Pryibil, P., 467 W. 40th st., N. Y.
Radcliff, Rowe & Co., 43 Plum st., Cin'ati, O.
Sebastian, May & Co., 177 W. 2d st., Cincinnati, O.
Seneca Falls Co., Seneca Falls, N. Y.
Simonds Mfg. Co., Fitchburg, Mass.; Chicago, Ill.
Spaulding, N. W., Saw Co., 17 Fremont st., San Francisco, Cal.
Stearns Mfg. Co., Erie, Pa.
White, John A., 31 S. Main st., Concord, N. H.
Williamsport Machine Co. (Ltd.), W. 3d & West sts., Williamsport, Pa.

Steam Scroll Saws.

Battle Creek Machinery Co., Battle Creek, Mich. **17.**
Beach, H. L., Montrose, Pa.
Colladay, Jos. O. & Bro., 626 Race st., Phila., Pa.
Cordesman Machine Co., 1-10 Friendship st., Cincinnati, O.
Dietz, Woermann & Co., 58 Plum st., Cincinnati, O.
Eaton, Wyman, Little Falls, N. Y.
Frank & Co., Buffalo, N. Y.
Moseley, Jerome S., Syracuse, N. Y.
Osborn, A. T. & Co., 113 Seneca st., Cleveland, Ohio.
Perry Machine Co., 160 Portland st., Boston, Mass.
Pryibil, P., 467 W. 40th st., N. Y.
Schenck, H. B., Matteawan, N. Y.
Sebastian, May & Co., 177 W. 2d st., Cincinnati, O.
Seneca Falls Co., 285 Water st., Seneca Falls, N. Y.
White, John A., 31 S. Main st., Concord, N. H.

*Scale in Boilers (Prevented).

Lord G. W., 316 Union st., Phila., Pa. **81.**

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Scales.

Fairbanks & Co., 311 B'way, N. Y.
Page, Dennis & Co., 325 Broadway, N. Y.
Riehle Bros., 50 S. 4th st., Phila., Pa.; 115 Liberty st., N. Y.

Screens—Coal & Mining.

Acme Steam Wire & Iron Railing Works, 86-90 Pearl st., Brooklyn, N. Y.
Albany Wire Works, Albany, N. Y.
Barnum, E. T., Detroit, Mich
Bataille, Achille, 122 W. Broadway, N. Y.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Cabble, Wm. (Excelsior Wire Mfg. Co.), 43 Fulton st., N. Y.
Cheney-Bigelow Wire Works, 34 Taylor st., Springfield, Mass.
Darby, Edward & Sons, 231-233 Arch st., Phila., Pa.
Dickson Mfg. Co., Scranton, Pa.
Eagle Iron Works, Terre Haute, Ind.
Eagle Iron Works, Wilkesbarre, Pa.
Estey, W. S., 71 Fulton st., N. Y.
Forest City Wire & Iron Works, 111 Franklin av., Cleveland, O.
Fraser & Chalmers, Union st., Chicago, Ill.
Gilbert & Bennett Mfg. Co., 228 Lake st., Chicago, Ill.; 42 Cliff st., N. Y.
Greenleaf, G. W. & Co., 90 Union st., Boston, Mass.
Harrington & King Perforating Co., 224 N. Union st., Chicago, Ill; 100 Beekman st., N. Y.
Hollenbeck & Miller, 47 S. Illinois st., Indianapolis, Ind.
Hopkins N. Y. Steam Wire Works, 90 W. Broadway, N. Y.
Howard & Morse, 45 Fulton st., N. Y.
Jelliff, C. O. & Co., Southport, Conn.
Needles, Joseph A., 54 N. Front st., Phila., Pa.
Obermayer Foundry Supply Mfg. Co. (The S.), Cincinnati, O.
Plews, Robert & Co., Pawtucket, R. I.
Sharon Boiler Works, Sharon, Pa.
Shepard, Estey W., 71 Fulton st., N. Y.
Snow John, 76-78 Exchange st., Rochester, N. Y.
Toledo Wire & Iron Works, 242 Summit st., Toledo, Ohio.
West Broadway Wire Works, 122 W. Broadway, N. Y
White, S. E., 151 State st., Rochester, N. Y.

Screens—Sand.

Abbott., Fred. N., Lawrence, Mass.
Albany Wire Works, Albany, N. Y.
Andrews, A. H. & Co., Chicago, Ill.
Barnum, E. T., Detroit, Mich.
Bataille, Achille, 122 W. Broadway. N. Y.
Brock & Ross, Scranton, Pa.
Burrows, E. T. & Co., Portland, Me.
Cabble, Wm., Excelsior Wire Mfg. Co., 43 Fulton st., N. Y.
California Perforating Screen Co., 147 Beale st., San Francisco, Cal.
Cary, J. C., 9 Walker st., N. Y.
Eagle Iron Works, Wilkesbarre, Pa.
Forest City Wire and Iron Works, 111 Franklin av., Cleveland, O.
Gilbert & Bennett Mfg. Co., 228 Lake st., Chicago; 42 Cliff st., N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Hollenbrek & Miller, 47 S. Illinois st., Indianapolis, Ind.
Hopkins, N. Y., Steam Wire Works, 90 W. Broadway, N. Y.
Kurtz, J. H., Shenandoah, Pa.
Ludlow-Saylor Wire Co., 116 S. 4th st., St. Louis, Mo.
Marshall Building Co., Marshalltown, Iowa.
Merserean, W. T. & Co., 321 Broadway, N. Y.
Muscatine Mfg. Co., Muscatine, Ia.
Nichols, D. M., Keene, N.H.
Obermayer Foundry Supply Mfg. Co., Cincinnati, O.
Ottumwa Screen Co., Ottumwa, Ia.
Patent Metallic Weather Strip Co. (The), 74 W. 23d st., N.Y.
Putney, H. W., Lyons, N. Y.
Quick, John W., San Francisco, Cal.
Reinalay & Schwartz, Tamaqua, Pa.
Roebuck, S., 164 Fulton st., N. Y.
Schmidt, Henry & Son, Keokuk, Iowa.
Sharon Boiler Works, Sharon, Pa.
Shepard, Estey W., 71 Fulton st., N. Y.
Way & Bost, 11 Warren st., N. Y.
Wright, C. & Son, Dayton, O.
Wilkesbarre Iron Fence & Screen Mfg. Co., Wilkesbarre, Pa.
Williams, Geo. A., 85 Fulton st., N. Y.
Wolfrom, F. W., Spencerport, N. Y.
Wooley & Co., 63 Fulton st., N. Y.
Worcester, Wm. W., 9 W. 7th st., Cincinnati, Ohio.

Scrapers—Box.

Cincinnati Tool Co. (The), 216 W. 2d st., Cincinnati, O.
Drew, C. & Co., Kingston, Mass.
Johnson, Wm., Newark, N. J.
Knapp & Cowles, Mfg. Co. (The), Bridgeport, Conn.
Stearns, E. C. & Co., Syracuse, N. Y.

Scrapers—Road.

American Steel Scraper Co., Sidney, O.
Belcher, B. & J. W., Chicopee Falls, Mass.
Claffy, John, 48 Dey st., N. Y. 91.
Dickson Mfg. Co, Scranton, Pa.
Ellis Road Scraper Mfg. Co., Lawrence, Kan.
Fay Mfg. Co., Elyria, Ohio.
Field, J. A. & Co., St. Louis, Mo.
Fleming Mfg. Co., Fort Wayne, Ind.
Frye, John J., 23 Preble st., Portland, Me.
Griffin Road Machine Co., Elyria, O.
Hoagland, Cumming & Co., Castile, N. Y.
Hubbard, H. N., 313 E. 22d st., N. Y.
Hunt & Adams, Indianapolis, Ind.
Kansas City Scraper Co., 23d st. & B'way, Kansas City, Mo.
Kilbourne & Jacobs Mfg. Co., 22 E. Broad st., Columbus, O. 2.
Maywood Co., 62 Metropolitan Blk., Chicago, Ill.
Moline Plow Co., Moline, Ill.
New York Plow Co. (The), 57 Beekman st., N.Y.
Novelty Iron Works, 3124 Market st., Phila., Pa.
Philips, A. J. & Sons, Fenton, Mich.
Slusser & McLain, Sidney, O.
Smalley Mfg. Co., Manitowoc, Wis.
Smith, Oliver A., Clarkston, Mich.
Taft, Geo. W., Abington, Conn.
Thompson, J. & Sons (The), Beloit, Wis.
Western Wheel Scraper Co., Mt. Pleasant, O.
Whitman Agricultural Co., 8th st. & Clark av., St. Louis, Mo.
Wilder Mfg. Co., Monroe, Mich.

*Scrapers—Ship.

Gilmore, E. W. & Co., N. Easton, Mass.

*Screw Eyes & Hooks.

Brooks, M. S., Chester, Conn.
Perry, N. C., Chester, Conn.
Richards, T. C., Hardware Co., West Winstead, Conn.

Screw Drivers.

Acme Shear Co. (The), Bridgeport, Conn.
Alford & Berkele Co. (The), 77 Chambers st., N. Y.
Bartlett Hardware Co., Freeport, Ill.
Bemis & Call Hardware & Tool Co., Springfield, Mass.
Billings & Spencer Co. (The), Hartford, Conn.
Brown, R. H. & Co., New Haven, Conn.
Chicago Watch Tool Co., 234 Pine st., Chicago, Ill.

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Cincinnati Tool Co. (The), 216 W. 2d st., Cincinnati, O.
Clayton Bros., Bristol, Conn.
Ellrich Hardware Mfg. Co. (The), Plantsville, Conn.
Elmwood Tool Co., Harrison, c. Sprague st., Providence, R.I.
Gay & Parsons, Augusta, Me.
Gould, Robt. S., 332 B'way, N.Y.
Graham, J. H. & Co., 113 Chambers st., N.Y.
Johnson, Wm., Newark, N.J.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Conn.
Kolb, G. F., 2207 Venango st., Phila., Pa.
Lucas, C. H. & Co., Canton, Me.
Mayhew, H. H. & Co., Shelburne Falls, Mass.
Miller Lock Co., Phila., Pa.
New England Specialty Co., North Easton, Mass
Standard Tool Co., Cleveland, O. 49.
Stanley Rule & Level Co., 29 Chambers st., N.Y
Tower & Lyon, 95 Chambers st., N Y.
Wilkinson, Henry, Collinsville, Conn.

Screws—Brass & Bronze.

Blake & Johnson, Waterbury, Conn.
Merrill Bros., 21 1st st., Brooklyn, E. D., N.Y.
Miles, Franklin S., Phila., Pa.
N. Y. Furniture Supply Co., 225 Canal st., N.Y.
Russell & Erwin Mfg. Co. New Britain, Conn., & 45 Chambers st., N.Y.
Steele & Johnson Mfg. Co. (The), Waterbury, Conn.
T. C. Richards Hardware Co., West Winsted, Conn.

Screw Lock Plates.

Hart Mfg. Co., 122 Pub. sq., Cleveland, O.

Screws—Machine.

American Screw Co., Providence R.I.
Belard, A. A. & Co., 89 Exchange st., Worcester Mass.
Blake & Johnson, Waterbury, Conn.
Chicago Screw Co., 94 W. Washington st., Chicago, Ill.
Cincinnati Screw & Tap Co. (The), 2d & Plum sts., Cincinnati, O.
Detroit Machine Screw Works, 68 Lafayette st., Detroit, Mich.
Duncreux, C., 93 & 95 Elizabeth st., N.Y.
Gifford, A. W., 75 Beacon st., Worcester, Mass.
Hartford Machine Screw Co., 476 Capitol st., Hartford, Conn.
Hopedale Machine Co., Hopedale, Mass.
McCloud, Crane & Minter, 57 Union st., Worcester, Mass.
Mass. Screw Co., Holyoke, Mass.
Montgomery & Co., 105 Fulton st., N.Y.
Mt. Carmel Bolt Co. (The), Mt. Carmel, Conn.
Newton, J. M. & Bro., Norwich, Conn.
Reynolds & Co., 321 East New Haven, Conn.
Russell & Erwin Mfg. Co., New Britain, Ct.; & 45 Chamber st., N. Y.
Western Automatic Machine Screw Co., 476 Capitol st., Hartford, Conn.
Wheeler, B. F., 384 Atlantic av., Boston, Mass.
Worcester Machine Screw Co., Worcester, Mass.

Screws—Manufacturers.

Allrich, Milton, Lowell, Mass
American Bolt Co., Lowell, Mass 24.
American Screw Co., 19 E. Lake st., Chicago, Ill.; 21 Stevens st., Providence, R. I.; 94 Chambers st., N. Y.
Atlantic Screw Works (Colt's, W. Armory), Hartford, Conn
Belard, A. A. & Co., 89 Exchange st., Worcester, Mass,
Billerbeck, J., 17th, c. Venango st., Philadelphia, Pa.
Blake & Johnson, 71 E. Main st., Waterbury, Conn.
Bliss, R., Mfg. Co., 301 Main st., Pawtucket, R. I.
Boone, W. C. & Son, Park av., c. Sandford st., Brooklyn, N. Y.
Boston Bolt Co., 92 Broad st., Boston, Mass.
Boswell, C. P., 5 Brown's race, Rochester, N. Y.
Bruce, G. W., 24 Duane st., N. Y.
Burnap, George F., Fitchburg, Mass.
Butler, R. A., 120 N. 6th st., Phila., Pa.
Cambridge Gimlet Screw Co., Lowell, Mass.
Central Bolt Works, 594 Walnut st., Cincinnati, O.
Central City Screw Works, Syracuse, N. Y.
Chapin's, H., Son, Pine Meadow, Conn.
Charles Parker Co., Meriden, Conn.
Chicago Screw Co. (The), 94 W. Washington st., Chicago, Ill.
Chicopee Falls Screw Co., Chicopee Falls, Mass.
Cincinnati Screw & Tap Co., 2d, c. Plum st., Cincinnati, O.
Clark Bros. & Co., Millidale, Conn.
Cleary, M., 93 Elizabeth st., N. Y
Cook, A. S. (Colt's Armory), Hartford, Conn.
Corbin, P. & F., New Britain, Conn.
Curtis, F. & Son, Springfield, Mass.
Detroit Machine Screw Co., 70 Lafayette st., Detroit, Mich.
Fetter Drive Screw Co., 104 John st., N. Y.
Greiley Co. (The), 103 Court st., New Haven, Conn.
Hartford Machine Screw Co (The), 476 Capitol av., Hartford, Conn.
Haskell, W. H. & Co., Pawtucket, R. I.
Haslett, F. M. & Co., Allegheny City, Pa.
Hoffman, J. & Son, 93 E. 4th st., N. Y.
Hope, W. H. & Co., Lowell, Mass.
Hubbel Screw Co. (Ltd.), 4 Fletcher st., N. Y.
Hunter, C. E., Hinsdale, N. H.
Jones, S., Jamestown, N. Y.
Jordan, W. E., Wilmington, Vt.
Judson, H., 9 Alling st., Newark, N. J.
Knapp, J., Lowell, Mass.
K. & W. Mfg. Co. (The), Chillicothe, O.
Lancaster & Co., Syracuse, N. Y.
Lyon, James W., 14 to 18 Dunham pl., Brooklyn, E.D., N. Y.
McCloud, Crane & Minter, 57 Union st., Worcester Mass.
Marland, Neely & Co., ft. S. 22d st., Pittsburgh, Pa.
Mass. Screw Co., Holyoke, Mass.
Michigan Bolt & Nut Works, Detroit, Mich.
Mead, E. B., 94 Chambers st., N. Y.
Miles, F. S., 205 Quarry st., Phila., Pa.
Moline Screw Co., Moline, Ill.
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
Mott, W., 258 W. 28th st., N. Y.
N. Y. Furniture Supply Co., 225 Canal st., N.Y.
Northwestern Screw Co., 843 W. Taylor st., Chicago, Ill.
Nutting, L. M. & Co., Concord, N. H.
Pawtucket Mfg. Co., Pawtucket, R. I.
Pierce Screw Co., Mt. Carmel, Conn.
Pittsburgh Tool Co., Pittsburgh, Pa.
Reynolds & Co., 321 East st., New Haven, Conn.
Rogers, C. & Bros., Meriden, Conn.
Russell, Burdsall & Ward, Port Chester, N. Y.
Russell & Erwin Mfg. Co., New Britain, Conn.; 43 Chambers st., N. Y.
Shaw Mfg Co., 174 High st., Boston, Mass.
Smith, L. B. & Co., 30 Hanover st., Boston, Mass.
Smith, S. C. & G. H., Lowell, Mass.
Southington Cutlery Co., Southington, Conn.
Spofford & Co., Dolgeville, N. Y.
Stearns, E. C. & Co., Syracuse, N. Y.
Syracuse Screw Co., 32-34 Lock st., Syracuse, N. Y.
Thurston Mfg. Co., Marlboro, N. H.
Turner, J., Lowell, Mass.
T. C. Richards Hardware Co., West Winsted, Conn.
Union Screw Co., 91 E. Lake st., Chicago, Ill.
Union Steel Screw Co., 429 Case av., Cleveland, O.
Upson Nut Co. (The), Unionville, Conn.
Welch, T. F. & Co., 8 Medford st., Boston, Mass.

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Wells Bros. & Co., Greenfield, Mass.
Western Automatic Machine Screw Co., Elyria, O.
Wicaco Screw Works, 712 Cherry st., Phila., Pa.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Worcester Machine Screw Co., Worcester, Mass.

Seats—(Perforated) Depot.

Frost & Peterson, 161 W. 18th st., N. Y.
Gardner, Holmes & Co., 183 Canal st., N. Y.
Gardner & Co., 643 W. 48th st., N. Y.
Hamel, Gust, Mfg. Co., De Soto, Mo.
Harrington & King Perforating Co., 224 N. Union st., Chicago, Ill.
Kane, Thomas & Co., 139 Wabash av., Chicago, Ill. **28 & 29.**
Sinclair, F. A., Mottville, N. Y. **41.**

Shafting—Hangers & Pulleys.

Abele, Chris, 253-255 W. 27th st., N. Y.
Adams & Price Locomotive & Machine Works, 6 Vauxhall st., Nashville, Tenn.
Akron Steam Forge Co., Akron, O.
Allen Mfg. Co., Chicago, Ill.
Allan & Sidnell, Norwalk, Ohio.
Allis, Edward P. & Co., Milwaukee, Wis.
American Paper Pulley Co., Indianapolis, Ind.
Am. Iron & Steel Works (Jones & Laughlins) (Ltd.), Pittsburgh, Pa.
American Tool & Machine Co. (The), 84 Kingston st., Boston, Mass.
Anthony, H. A., 9 Liberty st., Albany, N. Y.
Armitage, Herschell & Co., Tonowanda, N. Y.
Armstrong Bros., Springfield, O.
Ashtabula Bolt & Shaft Co., Ashtabula, O.
Bangor Foundry & Machine Co., 8-10 Central st., Bangor, Me.
Barnes, Chas. & Co., 40 Sycamore st., Cincinnati, O.
Bartley, Wm. & Sons, Bartley, N. J.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Bates, H. N. & Co., 358 Atlantic av., Boston, Mass.
Baugh Steam Forge Co., 1 Newberry & McMillan Bldg., Detroit, Mich.
Becker & Newton, Worcester, Mass.
Benjamin & Co., 17 S. Canal st., Chicago, Ill.
Birmingham Iron Foundry, Birmingham, Conn.
Blevney, John C., 597th av., Newark, N. J.
Bliss & Tracy, 51 S. Canal st., Chicago, Ill.
Boyts, Porter & Co., Connellsville, Pa.
Broadway Mfg. Co., Broadway, Va.
Brown, A. & F., 44 Park Place, N. Y.
Brown, S. N. & Co., Dayton, O.
Buffalo Steam Forge, 24 Hayen Bldg., Buffalo, N. Y.
Bullard, E. P., 62 College Place, N. Y.
Burgess Steel & Iron Works, Portsmouth, O.
Burlingame, A. & Co., 22 Cypress st., Worcester, Mass.
Burr & Dodge, 125 N. 5th st., Phila., Pa.
Butler & Gardner, 200 Liberty st., Pittsburgh, Pa.
Cannon, F. C., New Haven, Conn.
Carey, Thos. K. & Co., 21 S. Charles st., Balto., Md.
Carey, W. W., Lowell, Mass.
Carlisle Mfg. Co., Carlisle, Pa. **50.**
Carman, W. W., Exeter, N. H.
Chambers Bro. & Co., 52d st., bel. Lancaster av., Phila., Pa.
Chase Turbine Mfg. Co., Orange, Mass.
Chester Steel Casting Co., 407 Library st., Phila., Pa. **46.**
Chicago Forge & Bolt Co., 234 S. Clark st., Chicago, Ill.
Christiania Machine Co., 206 N. 4th st., Phila., Pa.
Clement, F. H., 121 Mill st., Rochester, N. Y.
Clot & Meese, 129 Fremont st., San Francisco, Cal.
Clunn, C. S. & Co., 915 Sansom st., Phila., Pa.
Cohoes Iron Foundry & Machine Co., Cohoes, N. Y.
Colborne, Oliver, 70 W. Monroe st., Chicago, Ill.
Corbett & Norrish, 1416 F st., Washington, D. C.
Cordesman Machine Co., Butler, opp. Little Miami Depot, Cincinnati, O.
Cordesman, Meyer & Co., 167 W. 2d st., Cincinnati, O.
Cowdrey, C. H., Fitchburg, Mass.
Cox & Price Bros., Marion, Ind.
Cranston & Co., 57 Park st., N. Y.
Cresson, Geo. V., 18th and Hamilton sts., Phila., Pa.
Davis & Furber Machine Co., N. Andover, Mass.
Delano, E. A., 53 and 55 S. Jefferson st., Chicago, Ill.
De Looch Mill Mfg. Co., Atlanta, Ga.
Dickson Mfg. Co., Scranton, Pa.
Dill, J. T., 145 Centre st., N. Y.
Doane, C. W., Saybrook, Conn.
Eagle Iron Works, 252 Woodbridge st., W. Detroit, Mich.
Eagle Iron Works, Terre Haute, Ind.
Eastwood, Benj., Paterson, N. J.
Eaton & Prince, 74 and 76 Michigan st., Chicago, Ill.
Ebert, John S., 442 Water st., N. Y.
Eclipse Wind Engine Co., Beloit, Wis.
Edison Machine Works, 19 Dey st., N. Y.
Edwards, Stevens & Co., Winooski, Vt.
Egan Co. (The), 232 W. Front st., Cincinnati, Ohio.
Ehrsam, F. W., 78-80 Pearl st., N. Y.
Ehrsam, J. B., Machine Co., Enterprise, Kan.
Ellison, F., Springfield, Mass.
Enterprise Machine Co., 423 4th st., S. Minneapolis, Minn.
Erie Forge Co, (Ltd.), Erie, Pa.
Eustace, E. C., 54 Centre st., N. Y.
Ewald Iron Co., St. Louis, Mo.
Eyre, Henry C. & Co., Chester, Pa.
Fairmount Machine Works, Phila., Pa.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Farrell Foundry & Machine Co. (The), Ansonia, Conn.
Fay, J. A. & Co., Cincinnati, O.; 120 B'way, N. Y.
Felger, Geo., & Sons, New Springfield, O.
Fischer Foundry & Machine Co., Pittsburgh, Pa.
Fischer, Thos. & Co., 21st & Mary sts., s. s., Pittsburgh, Pa.
Fishkill Landing Machine Co., Fishkill, N.Y. **iv.**
Fitchburg Steam Engine Co., Fitchburg, Mass.
Fitzsimmons & Co., 626 B'way, Cleveland, O.
Forbes, Geo. & Co., East Brookfield, Mass.
Forsaith, S. C., Machine Co., Manchester, N. H.
Franconia Iron & Steel Works, Warcham, Mass.
Franklin Machine Co., Providence, R.I.
Frick & Co., Waynesboro, Pa.
Friction Pulley Co., Sandy Hill, N. Y.
Frisbie, D. & Co., 112 Liberty st., N.Y.
Fritsch, Francis, Cincinnati, O.
Gage Machine Works, Waterford, N.Y.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Gemlo, D. W. & Son, 917 Washington av., S., Minneapolis, Minn.
Getchell, J. S. & Son, Houlton, Me.
Giles & Clancy, Water, c. Golden Hill st., Bridgeport, Conn.
Gill, Philip H., 11-17 Bowne st., Brooklyn, N. Y.
Goodell & Waters, 3102 Chestnut st., Phila., Pa.
Grainger & Co., 10th st., bet. Main st. and the river, Louisville, Ky.
Graves, L. S. & Son, Centre st., Rochester, N. Y.
Greenfield, W. G. & G., 5th, c. Cross st. E. Newark, N. J.
Haughton, N., Huron, n. Lafayette st., Toledo, Ohio.

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Haughton & Knieseer, Toledo, O
Hawkins Machine Co. (The), 49 High st., Boston, Mass.
Heartley, Geo. W., 293 St. Clair st., Toledo, O.
Helmbacher Forge & Rolling Mills Co., St. Louis, Mo.
Hercules Iron Works, Canal & Carroll sts., Chicago, Ill.
Herrick, W., Northampton, Mass.
Hodge, Samuel F. & Co., 320 Atwater st., Detroit, Mich.
Hodgkins, C. & Sons, Marlboro', N. H.
Hodson, G. & J., 226 Arch st., Phila., Pa.
Holmes Gear Works (The), Gardiner, Me.
Holmes & Blanchard, 37 Charlestown st., Boston, Mass.
Holt, S. L. & Co, 67 Sudbury st., Boston, Mass.
Hot Polished Shafting Co., Haselton O.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st, N.Y.
Humphrey Machine Co., Keene, N.H.
Hunter, James & Son, North Adams, Mass.
Hutchinson Bros., Manchester, N.H.
Jeffrey Mfg. Co. (The), Columbus, O.
Jones & Hitchings, Fore & Cross sts., Portland, Me.
Jones & Laughlin (Ltd.), 3d av., c. Try st., Pittsburgh, Pa.
Kaestner, C. & Co., 303 S. Jefferson st., Chicago, Ill.
Kilburn, Lincoln & Co, Fall River, Mass.
Kinyon Bros., Raritan, N. J.
Klein, Chas. C., Marshall, n. Cambria sts., Phila., Pa
Knowlson & Kelley, River st., Troy, N. Y.
Knowlton Bros., Camden, Me.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lane, G. W. & C. A., Exeter, N. H.
Lane Mfg. Co., Montpelier, Vt.
Lane & Bodley Co. (The), 267-283 Water st., Cincinnati, O.
Lake Erie Iron Co., 101 St. Clair st, Cleveland, O.
Lawrence & Chapin, Kalamazoo, Mich.
Licking Iron Works (Licking Rolling Mill Co.) Covington, Ky.
Link Belt Machinery Co., 11 S. Jefferson st., Chicago, Ill.
Logan, James H., Penn Bldg., Pittsburgh, Pa. 53.
Lombard, Geo. R. & Co., Augusta, Ga.
Louisville Machine & Elevator Works, 717 to 733 E. Main st., Louisville, Ky.
Lowell Machine Shop, 28 State st., Boston, Mass.
McKaig, Merwin, Chamberlain, Md.
McLaren, J., 47 Liberty st., Albany, N. Y.
McMurray, C. F., Hartford, Conn.
Marquette, J. W. 118 W. Falls st., Baltimore, Md.
Medart Patent Pulley Co., 26 S. Canal st., Chicago, Ill.
Middlebrook Elevator Mfg. Co., 110 W. Larned st., Detroit, Mich.
Moore & White, 1312 Buttonwood st., Phila., Pa.
Morris Machine Works, Baldwinsville, N. Y.
Morris, Wheeler & Co., Phila., Pa.
Moyles, H., 210 1st st., Troy, N. Y.
Nashua Iron & Steel Co., Nashua, N. H. 56.
National Iron Works, New Brunswick, N. J.; 18 Cortlandt st., N. Y.
New Albany Forge & Rolling Mill Co., New Albany, Ind,
New England Machine Co., 29 Haverhill st., Boston, Mass.
Nordkye & Marmon Co., Indianapolis, Ind.
North Star Iron Works, Minneapolis, Minn.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Novelty Iron Works, Dubuque, Iowa.
Novelty Mfg. Co., Depere, Wis.
Noye, John T. Mfg. Co, Buffalo, N.Y.
Oram, John S., 155 River st., Cleveland, Ohio.
Pacific Iron Works, Bridgeport, Conn.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Packard, O. L, Milwaukee, Wis.
Paige Mfg. Co. (The), Painesville, O.
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Pencoyd Iron Works, (A. & P. Roberts & Co.), 261 S 4th st, Phila., Pa.
Phœnix Iron Foundry, Elm c. Eddy st., Providence, R. I.
Phila. Shafting Works, 18th & Hamilton sts., Phila., Pa.
Phœnix Iron Works, Wason st., Cleveland, O.
Phœnix Iron Works, 54-60 Arch st., Hartford, Conn.
Pierson & Co., 24 West st., N.Y.
Place, Geo., 120 B'way, N.Y. 81.
Piamondon, A., Mfg. Co., 57 S. Clinton st., Chicago, Ill.
Poole & Hunt, 7 German st., Baltimore, Md.
Pottsville Rolling Mills (Pottsville Iron & Steel Co.), Pottsville, Pa.
Powell, A. C. & Son, Syracuse, N.Y.
Power, L. & Co., 20 S. 23d st., Phila., Pa.
Prentiss Tool & Supply Co., 42 Dey st., N.Y.
Pryibil, P., 461-467 W. 40th st., N.Y.
Puster Bros., 44 S. Canal st., Chicago, Ill.
Putnam Machine Co., 115 Liberty st., N.Y.
Pyne, W. T., 1036-1106 & 1107-1117 W. Main st., Louisville, Ky.
Reed, J. H., Franklin, c. Elm st., N.Y.
Rice, Charles L., 13 S. Canal st., Chicago, Ill.
Richmond City Mill Works, Richmond, Ind.
Ritchie & Dyer Co., Hamilton, O.
Roberts, A. & P. & Co, 261 S. 4th st., Phila., Pa.
Roberts, J. H. & Co,, 116 Merrimac st., Boston, Mass.
Rock Island Arsenal, Rock Island, Ill.
Rodney Hunt Machine Co., Orange, Mass.
Rollstone Iron Foundry, Fitchburg, Mass.
Ross, Charles, Jr., 31-33 S. 5th st., E. D., Brooklyn, N.Y.
Russell Iron Works, Toledo, O.
Salem Foundry & Machine Shop, Salem, Mass.
Sandy Hill Iron & Brass Works, Sandy Hill, N.Y.
Schofield, George L., 123 N. Front st., Phila., Pa.
Sellers, Wm. & Co., 1600 Hamilton st., Phila., Pa.
Sharon Steel Casting Co., Sharon, Pa.
Sheriff & Ashworth Machine Co., 80 Water st., Pittsburgh, Pa.
Siebert Patent Pulley & Journal Box, 2237 De Kalb st., St. Louis, Mo.
Sioux City Foundry & Machine Works, Sioux City, Ia.
Skinner Engine Co, Erie, Pa.
Smith, H. E., 31 Artizan st., New Haven, Conn.
Smith, Jas., Woolen Machinery Co. (The), 411-421 Race st., Phila, Pa.
Spangenburg, Pendleton & Co., Warren, O.
Sprowles & Houseman, 243 Arch st., Phila., Pa
Standard Iron Co., 4th st. & 9th av., S., Minneapolis, Minn.
Starr, B. F. & Co., North & Centre sts., Baltimore, Md.; 391 Greenwich st., N.Y.
Steel Pulley & Machine Works, Indianapolis, Ind
Stilwell & Bierce, Dayton, O.
Stow Flexible Shaft Co. (Ltd.), 2218 Penn av., Phila., Pa. 26
Straub Machinery Co., Front & John sts., Cincinnati, O.
Stratton, C. H., Salem, O.
Sullivan Machine Co., Claremont, N. H.
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Swampscot Machine Co., South Newmarket, N. H.
Swift's Iron & Steel Works, Newport, Ky.
Taper Sleeve Pulley Works, Erie, Pa.; 45 Dey st., N. Y.
Thornburgh & Glessner, 18-22 N. Clinton st., Chicago, Ill.
Tifft, Geo. W., Sons & Co,, Buffalo, N. Y.
Todd Pulley & Shafting Works, 805 N. Main st., St. Louis, Mo.
Tolhurst Machine Works, 7 6th st., Troy, N. Y.

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Tompkins Bros., ft. Cypress st., Ida Hill, Troy, N. Y.
Tompkins, D A., Co. (The), Charlotte, N. C.
Towe Bros., Hudson, Mass.
Townsend Furnace & Machine Shop, B'way, c. Rensselaer st., Albany, N. Y.
Ulrich & Allison, Rock Falls Ill.
Union Rolling Mill Co., 122 Water st., Cleveland, O.
Vulcan Iron Works, Toledo, O.
Walker Mfg Co., 51 W. Washington st., Chicago, Ill.
Walker Mfg. Co., ft. Waverly av., Cleveland, Ohio.
Waterbury Farre'l Foundry & Machine Co. (The), Waterbury, Conn.
Waters, W. L. & Sons, Nashville, Tenn.
Watson Machine Co. (The), Paterson, N. J.
Western Forge & Rolling Mills, 16 N. 4th st., St. Louis, Mo.
White, John A., 31 S. Main st., Concord, N. H.
Whi'ing Mfg. Co., Cedar Rapids, Iowa.
Williams & Orton Mfg. Co., Sterling, Ill.
Winn, Jeremiah, 29 Cypress st., Worcester, Mass.
Winsted Foundry & Machine Co., Winsted, Conn.
Woods S. A. Machine Co., 172 High st., Boston, Mass.
Wood, Thos. & Co., 2106 Wood st., Phila., Pa.
Woodward, W. A., Lowell, Mass.
Wright. Wm., Newburgh, N. Y.
York, S. M , 44 S. Water st., Cleveland, O.
Zwick, Grunwald & Co. (Ltd.), Dayton, O.

Shafts & Shafting—Steel.

Akron Iron Co., Akron, O.
Burgess Steel & Iron Works, Portsmouth, O.
Byers, A. M. & Co., Pittsburgh, Pa.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
Norway Steel & Iron Co., 6 Oliver st, Boston, Mass.
Penn sylvania Steel Co , Steelton, Pa.; 208 S. 4th st., Phila., Pa. **viii.**
Solid Steel Co. (The), Alliance, O.
Western Forge & Rolling Mills, 210 N. 3d st., St. Louis, Mo.

Sharpeners—Metal.

Blackmer, A., 113 2d av., s. e., Minneapolis, Minn.
Comstock, Phil., E., Ascutneyville, Vt.
Diamond Emery Wheel & Machine Co., Providence, R. I.
Halliday, Litchfield & Co., 17 S. Canal st., Chicago, Ill.
Olney, S. P. & Co., Detroit, Mich.
Parsons, Asa S., Bridgeport, Conn.

Shears and Scissors (Power).

Acme Shear Co., Bridgeport, Conn.
Alford & Berkele Co., 77 Chambers st., N. Y.
Avery & Barton, 42-48 S. Clinton st., Chicago, Ill.
Bement, Miles & Co., Philadelphia, Pa.; 120 Broadway, N. Y.
Berridge, T. & Son, Sturgis, Mich.
Bertsch & Co., Cambridge City, Ind.
Birmingham Iron Foundry, Birmingham, Ct.
Conqueror Punch & Shear Co., 32 Liberty st., N. Y.
Clayton Brothers, Bristol, Conn.
Diaz, Robert M. & Co., 292 Washington, opp. School st., Boston, Mass.
Fanel Foundry & Machine Co., Ansonia, Ct.
Ferracute Machine Co., Bridgeton, N. J. **15.**
Fisher Engine, Foundry & Machine Works, 23d, 24th & Smallman sts., Pittsburgh, Pa.
Wm. Fisher, 23d & Smallman sts., Pittsburgh, Pa.
Henry Seymour Cutlery Co., Holyoke, Mass.
Howard. Geo. C., 19 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.
Howe Bros. & Hulbert, W. Winsted, Conn.
Kent, Robert, 45 Jay st., Brooklyn, N. Y.
Long & Allstatter Co. (The), Hamilton, O.
Lyon, E. & Co., 470 Grand st., N. Y.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Norfolk Shear Co., Norfolk, Conn.
Pratt & Whitney Co., Hartford, Conn.
Pusey & Jones Co., Wilmington, Del.
Sellers & Co., William, Philadelphia, Pa.
Simpson, J. S. & G. F., 26-36 Rodney st., Brooklyn, E. D., N. Y.
Stiles & Parker Press Co. (The), Middletown, Conn.
Watson & Stillman, 210 E. 43d st., N. Y.
Whitcomb Mfg. Co., Worcester, Mass.
Williams, White & Co., Moline, Ill.

Sheathing—Yellow Metal.

Eureka Compressed Yeast Co., 222 Main st., Memphis, Tenn.
Fleischmann & Co., Cincinnati, O.; Houston & Galveston, Texas.
Muntz Metal Co. (Ltd.), 44 Kilby st., Boston, Mass.
New Bedford Copper Co., New Bedford, Mass.
Queen City Compressed Yeast Co., Cincinnati, Ohio.
Taunton Copper Mfg. Co., Taunton, Mass.
The West Virginia Mfg. Co., Piedmont, W. Va.

Sheathing—Paper & Felt.

Asbestos Packing Co., 169 Congress st., Boston, Mass.
Chalmers-Spence Co., 419 8th st., N. Y. **iv.**
Corner, Chas. H., Clay, c. Franklin st., Louisville, Ky.
Johns, H. W., Mfg. Co., 87 Maiden lane, N. Y.
New England Felt Roofing Co., 22 Milk st., Boston, Mass.
Newton Paper Co., Holyoke, Mass.
Revier Copper Co., 242 South st., N. Y.
Small, Gould & Co., Baldwinsville, Mass.
Storey, J. C. & Co., 10 State st., Boston, Mass.
Wiswall, Aug. C. & Son, Newton Lower Falls, Mass.

Sheet Holder & Slack Gatherer.

American Ship Windlass Co., Providence, R. I. **xii.**

Shellac—Manufacturers.

Feigel, M. & Bro., 147 Mercer st., N. Y.
Loos & Schneider, 26 Frankfort st., N. Y.
New York Shellac Co., 229 Pearl st., N. Y.

Shellac—Substitute.

Woodhouse, Samuel F., Frankford, Pa. **70.**

*Shingles.

Chatterton, J. B., E. end Plymouth av. bridge, Minneapolis, Minn. **54.**
Jackson Lumber Co., Lockport, N. Y. **21.**
Martin & Barriss (red cedar), 130 Central way, Cleveland, O. **51.**
Thorn Shingle & Ornament Co., N. W. c. 12th & Callowhill sts., Phila., Pa.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**

Shingles—Metallic.

Anglo-American Roofing Co., 22 Cliff st., N. Y.
Bakewell & Mullins, Salem, O.
Cartright Metal Roofing Co., Broad & Race sts., Phila., Pa.
Green Bros., 48 Maybury Grand av., Detroit, Mich.
Hyndman, W. G. & Co., Cincinnati, O.
Metallic Roofing Co., 82½ Yonge st., Toronto, Ont.
National Sheet Metal Roofing Co., 510 E. 20th st., N. Y.
Porter Iron Roofing Co., Cincinnati, O.
Van Noorden, E. & Co., 383 Harrison av., Boston, Mass.

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Ship Builders.

Abbott, J. & Bro., Milford, Del.
Adams, G. M., Bath, Me.
Adams, M., Essex, Mass.
Adams, Wm. & Son, East Boothbay, Me.
Allen, A., Seattle, Washington Ter.
Allen Bros., Rondout, N.Y.
Allen, Thos., River rd., ft. Summit av., Detroit, Mich.
Atkins, D., Milton, Del.
Atkinson, B. F. & Son, Newburyport, Mass.
Atkinson & Fillmore, Newburyport, Mass.
Atlantic Works, 72 Border st., East Boston, Mass.
Bannon & Son, Jeffersonville, Ind.
Beacham, J. S. & Bro., ft. of Warren av., Baltimore, Md.
Bird, T. S., ft. of India st., Brooklyn, N.Y.
Birely, Hillman & Streaker, 1441 Beach st., Phila., Pa.
Bishop & Murphy, Gloucester, Mass.
Black, J. & Bro., Milton, Del.
Bliven, A. P. & Co., 30 B'way, N.Y.
Bliven, C. H., 83 South st., N.Y.
Boole, G., 5 Spear st., San Francisco, Cal.
Brooks, J. M., 334 Border st., E. Boston, Mass.
Brown & Crook, New Bedford, Mass.
Brusstar, H. & Bro., Philpot, nr. Drawbridge, Baltimore, Md.
Budge, J., Grand Haven, Mich.
Burnham, W. A., Essex, Mass.
Campau, Sylvester, River rd., ft. Campau st., Detroit, Mich.
Carter, C. P. & Co., Belfast, Me.
Clark Dry Dock Co., Clark av. and River rd., Detroit, Mich.
Clark, E. O., Waldboro, Me.
Cleveland Ship Building Co., Detroit, c. Centre st., Cleveland, O.
Cone, D. D., 1305 F st., Washington, D. C.
Cottrell, G. W., Belfast, Me.
Cottrell, J. Y., Belfast, Me.
Cox & Son, 1404 Beach st., Phila., Pa.
Cramp, W. & Sons, Phila., Pa.
Cramp, Wm. & Sons (Ship & Engine Building Co.), 44 B'way, N. Y.
Crawford, A., ft. Chesapeake st., Baltimore, Md.
Crocker & Davidson, New London, Conn.
Crosbie, R. & Son, Harbor View, E. Boston, Mass.
Crosby, J. H., Bangor, Me.
Currier, G. E., Newburyport, Mass.
Currier, J., Jr., Newburyport, Mass.
Cuddy, Wm. & Co., 40 Atwater st., Detroit, Mich.
Davis, C., Milton, Del.
Davis, J. A., Quay, c. Columbia sts., Albany, N.Y.
Danton, J., Condor, c. Meridian sts., Boston, Mass.
Deakyne, G., ft. Jersey av., Jersey City, N. J.
Deering & Donnell, Bath, Me.
Delany, F., 950 Hanover st., Phila., Pa.
Detroit Dry Dock Co., Atwater & Orleans sts., Detroit, Mich.
Dialogue, J. H., Camden, N. J.
Dickie Bros., 7 Spear st., San Francisco, Cal.
Englis, J. & Sons, 32 Greenpoint av., B'klyn, N. Y.
Farnham, J. H. & Co., 6 Folsom st., San Francisco, Cal.
Fernald, W. F. Portsmouth, N. H.
French, J., Taunton, Mass.
Friable, A. J., Salem, Mass.
Flye, E., Newcastle, Me.
Garrison, W., Goshen, N. J.
Germ, W. H. & Co., Bucksport, Me.
Gesner & Marr, West Haven, Conn.
Gifford, C., Tisbury, Mass.
Gildersleeve, S. & Son, Portland, Me.
Globe Iron Works, Elm, c. Spruce st., Cleveland, O.
Goble & McFarlane, Oswego, N. Y.
Gordon, E. & Son, 58 17th st., Detroit, Mich.
Grant, I. M., Ellsworth, Me.
Hall Bros., 28 California st., San Francisco, Cal.
Hall, G. W., 115 Broadway, N. Y.
Hanscom, H. H., River, c. Ferry st., New Haven, Conn.
Harlan & Hollingsworth Co., 115 B'way, N.Y.
Harlan & Hollingsworth Co. (The), Wilmington, Del.
Hillman, B. & Co., Camden, N. J.
Hinds, W., Calais, Me.
Hitchcock, S. P., Bath, Me.
Hogan, T. M. & Co., Bath, Me.
Hohenstein Mfg. Co., 49 Dey st., N. Y.
Holmes, Samuel, 120 Front st., N. Y.
Howland, J. W., New Bedford, Mass.
Howard & Co., Jeffersonville, Ind.
Hoyt, Wm. B., 75 South st., N. Y.
Hubbe, M. & Co., 65 Wall st., N. Y.
Huston, C. S., Eastport Me.
Irving, A. & Co., Mystic River, Conn.
Jackman, G. W., Jr., Newburyport, Mass.
James, J. & Co., Essex, Mass.
Kelly, D. D. & Son, Marginal st., n. Simpson's Dry Dock, East Boston, Mass.
Lauer's, J. Sons., 522 S. Del. av., Phila., Pa.
Lawlor, D. J., Condor, c. Meridian sts., Boston, Mass.
Leary, J. D., 73 William st., N. Y.
Leary, J. L., ft. N. 6th st., Brooklyn, N. Y.
Lester, D., Marine City, Mich.
Lord, A., Ellsworth, Me.
McCausland, J., Rondout, N. Y.
McCosker, T. & Co., ft. of Patuxent st., Baltimore, Md.
McDonald & Brown, Belfast, Me.
McKay, Nathaniel, 19 Whitehall st., N. Y.
McMullin, R. G., 1450 Beach st., Phila, Pa.
Madison Marine Railway & Ship Yard Co., Madison, Ind.
Mack, D., Essex, Conn.
Mack, J., Eastern av., c. May st., Cincinnati, Ohio.
Mehan, N. C., Thomaston, Me.
Milwaukee Shipyard Co., Canal st., Milwaukee, Wis.
Miner, C. M., Madison, Conn.
Monk, J. E., Sandusky, O.
Montgomery & Howard, Chelsea, Mass.
Moore, E., Jr., Wilmington, Del.
Morgan Iron Works, 84 East 9th st., N. Y.
Morris & Mathis, Camden, N. J.
Murphy & Miller, Whiskey Island, Cleveland, Ohio.
Neafie & Levy, Beach & Palmer sts., Phila., Pa. 26.
New England Ship Building Co., Bath, Me.
Norman, A., 336 S. Delaware av., Phila., Pa.
Norton Naval Construction & Ship Bldg. Co., Fuller Bldg., Jersey City, N.J.
Oades, J. W., ft. of Dubois st., Detroit, Mich.
Obenberger, G., 125 Barclay st., Milwaukee, Wis.
Palmer, R. & Sons, Groton, Conn.
Pennell, N., Chester, Pa.
Peterson, N. C., 385 Atwater st., Detroit, Mich.
Poillon, C. & R., ft. of Clinton st., Brooklyn, N.Y.
Poland, D., Essex, Mass.
Pregnall, S. J. & Bro., Charleston, S.C.
Presley & Co., 95 Elm st., Cleveland, O.
Pusey & Jones Co., Wilmington, Del.
Quayle's T. Sons, Stone's Levee & Central Way, Cleveland, O.
Radcliffe, W. H., ft. of Taylor st., Cleveland, Ohio.
Revel & Simpler, Milford, Del.
Richard Bros., ft. of Washington st., Jersey City, N.J.
Rideout & Lord, Calais, Me.
Robertson, Budge & Co., Grand Haven, Mich.
Ruark, E. W. & Co., ft. Jackson st., Baltimore, Md.
Sewall, A. & Co., Bath, Me.
Ship & Engine Building Co. (The), Beach, ab. Norris st., Phila., Pa.
Simpson, A. M. Bros. & Co., 44 Market st., San Francisco, Cal.

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Skinner, W. & Sons, ft. of Cross st., Baltimore, Md.
Smith, J. E., Nyack, N.Y.
Smith, P., Whisky Island, Cleveland, O.
Smith & Townsend, 374 Border st., Boston, Mass
Snow & Pearson, Rockland, Me.
Soule, E. & Co, Bath, Me.
Southard, T. J. & Son, Richmond, Me.
Starin, J. H., ft. of Wilson st., Jersey City, N. J.
Starkey, N., Essex, Conn.
Starrett, S., Rockland, Me.
Stillwell, Albert H., 764 & 776 Swanson st., Phila., Pa.
Stone, W., Corea, n. Tallapoosa st., San Francisco, Cal.
Story, A. D., Condor & Meridian st. bridge, East Boston, Mass.
Story, J., Essex, Mass.
Submarine Monitor Co., 10 W. 23d st., N.Y.
Taylor, J. E., Meridian st. bridge, Boston, Mass.
Tebo, Wm. M., 23 South st., N.Y.
Telson Bros., Evansville, Ind.
Theobald G. H., Richmond, Me.
Tilton, S. W., Camden, N.J.
Trott, C., Kennebunkport, Me. **46.**
Turner, M., 122 California st., San Francisco, Cal.
Union Dry Dock Co., Buffalo, N. Y.
Virginia Iron Ship Building Co., Alexandria, Va.
Waite, S. R. & Co., 425 E. Hughes st., Baltimore, Md.
Ward, L. C., 52 John st., N. Y.
Watts, L. C., Denmark, c. Osage st., San Francicso, Cal.
Watts, S. & Co., Thomaston, Me.
Wellener, J. T., 1315 Philpot st., Baltimore, Md.
Weston House Boat Co., 99 Equitable Bldg., Boston, Mass.
Wheeler & Crane, West Bay City, Mich.
Whitcomb, J. G., Provincetown, Mass.
Williadsen & Jackson, Morris Canal Basin, Jersey City, N. J.
Wolf & Davidson, ft. of Washington st., Milwaukee, Wis.
Woodall, W. E. & Co., ft. of Allen st., Baltimore, Md.
Wright, W. A. & Son, Ferry, c. Meadow st., New Haven, Conn.

Ship Fixtures, Etc.

Beeching, R. & Co., 67 Blackstone st., Boston, Mass.
Lindsay, Parvin & Co., 133 S. 4th st., Philadelphia, Pa.
Merchant & Co., 9 Burling sl, N. Y.; 317 Arch st., Philadelphia, Pa.
New England Ship Building Co., Bath, Me.
Richardson, Nathan, Gloucester, Mass.
Torrey, J. G. & Son, 180-182 Main st., Rockland, Me.

Ship and Cabin Stores.

Avery, John W., 309 Water st., N.Y.
Boston, R. S. & Co., 243 Greenwich st., N.Y.
De Graw, Aymar & Co., 34 South st., N.Y.
Glore, John A. P. & Co., 212 Duane st., N.Y.
Mills, Stephen H. & Co., 107 South st., N.Y.
N. Y. Steamship & Hotel Co., 243 Greenwich st., N. Y.
Rosevelt & McDonald, 263 South st., N.Y.
Snelling, John H., 158 South st., N.Y.
Watts, Parker & Co., 75 Front st., N.Y.

Ship Chandlers.

Ajello & Cafiero, 15 Hamilton av., Brooklyn, N. Y.
Alden, W. G., Camden, Me.
Allison & Mason, 1 Russia whf., Boston, Mass.
Allport, J. G. & Co., 17 South st., N.Y.
Anderson, R. H., 28 South st., N.Y.
Anson, J., 53 Hamilton av., Brooklyn, N.Y.
Austin, D. S. & Co., 29 Ohio st., Buffalo. N.Y.
Avery, E. P., 207 Long whf., New Haven, Conn.
Bailey, H. B. & Co., 51 South st., N. Y.
Baker, C. & J. F., 107 Commercial st., Boston, Mass.
Baker, E. & J., 138 N. Del. av., Phila., Pa.
Baker, Francis T., ft. Delancey st., N. Y.
Baker, Howard H. & Co., 18-26 Terrace st., Buffalo, N. Y.
Baker, James, 99 Com'l st, Boston, Mass.
Baker, J. & Co., 79 Com'l st., Boston, Mass.
Baker & Carver, 29 South st., N. Y.
Bannerman, W. J., 14 Atlantic av., Brooklyn, N. Y.
Barberie, John, 77 South st., N. Y.
Barrett, E. M., 48 Essex st., Jersey City, N. J.
Barstow, Walter J., 83 Maiden Lane, N. Y.
Bartlett & Shepherd, 304 N. Front st., Philadelphia, Pa.
Baxter, John F., 308 West st., N. Y.
Bayles, J. M. & Son, Port Jervis, N. Y.
Bear, L. & Co., Pensacola, Fla.
Braun, J., 65 Kent av., Brooklyn, N. Y.
Bell, J. W., Pensacola, Fla.
Bickford, W. D. & Sons, 249 Atlantic av., Boston, Mass.
Biggam, Hamilton, 399 West st., N. Y.
Billings & Spencer Co. (The), Hartford, Conn.
Bixler, W. H. H. & Co., 500 E. Hughes st., Baltimore, Md.
Bliss, J. & Co, 328 Atlantic av., Boston, Mass.
Burns, B., 125 N. Canal st., Chicago, Ill.
Byrnes, Thos., 15 James sl., N. Y.
Carpenter, G. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Cash, W. D., Key West, Fla.
Central Trading Co., Wellfleet, Mass.
Central Wharf Co., Provincetown, Mass.
Channon, H. Co., 26 S. Market st., Chicago, Ill.
Chase, G. E., Jacksonville. Fla.
Chase, Talbot & Co., 30 South st., N. Y.
Chesley & Graham, 11 Ohio st., Buffalo, N. Y.
Childs, T. H., 16 Atlantic av., Boston, Mass.
Clausen & Hofmann, 12 Old sl., N. Y.
Coffin & Hendry, Junction, Market, c. Sacramento st., San Francisco, Cal.
Coggeshall, L., Newport, R. I.
Consolidated Boat Store Co. (The), 11 Public Landing, Cincinnati, O.
Cook, Adam, 313 West st., N. Y.
Cook, H. & S. & Co, Provincetown, Mass.
Coombs & Co., Apalachicola, Fla.
Conwell, D., Provincetown, Mass.
Coschina, F. & Co., 15 Union st., B'klyn, N.Y.
Crawford, A. & Co., 25 Market st., San Francisco, Cal.
Creed, Richard W., 121 Chambers st., N. Y.
Erie, R. Fred. & Co., 206 Main st., Rockland, Me.
Crocker, T. & Sons, Barnstable, Mass.
Crocker, Wood & Co., 52 South st., N. Y.
Cuff, J. T. & Bro., 1132 Blk., Baltimore, Md.
Cunningham, J., Savannah, Ga.
Currie & Co., Richmond, Va.
Curry, W., Key West, Fla.
Darrah & Elwell, 512 and 514 S. Delaware av., Phila., Pa.
Darrow & Comstock, New London, Conn.
Davis & Conklin, Atlantic City, N. J.
Davidson, J. & Son, 282 S. Water st., Chicago, Ill.
Degraw, Aymar & Co., 34 and 35 South st., N. Y.
Deike, F. & Co., 58 West st., N. Y.
Dennison & Co., Portland, Ore.
Donaldson, J. P. & Co., 22 Woodward av., Detroit, Mich.
Dugan, W. T., Wabasha, Minn.
Dunham, Geo. B. & Co., 264 S. Water st., Chicago, Ill.
Ebersole & Anderson, 126 S. 2d st., Phila., Pa.
Edgar, G. H. & Co., 207 Smith's Wharf, Baltimore, Md.
Edwards, D. H. & Co., 16 Woodward av., Detroit, Mich.

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Endicott, C. G., 49 Hudson st., Jersey City, N. J.
Fears, G. L., Gloucester, Mass.
Fedde, Gabriel, 31 Stone st., N. Y.
Ferdinand, L. W. & Co., 267 Federal st., Boston, Mass.
Finney & Channon, 270 S. Water st., Chicago, Ill.
Fish, J. D. & Co., 153 Maiden Lane, N. Y.
Fisher, G., Bath, Me.
Fitler, E. H. & Co., 22 N. Delaware av., Phila., Pa.
Flanagan, Thomas, 133 South st., N. Y.
Foard, L., 3 Stewart, c. Market sts., San Francisco, Cal.
Fogarty & Johnson, Key West, Fla.
Font's Sons, 275 Julia st., New Orleans, La.
Foster, G. B., Beverly, Mass.
Fradley, F., 43 Hamilton av., B'klyn, N. Y.
Frederick, J. W. & Co., Belfast, Me.
Gallup, J. & Co., 58 Clay st., San Francisco, Cal.
George, E. & Co., 82 South st., N. Y.
Gilchrest & Tobey, 36 South st., N. Y.
Goodhue, A. P., Salem, Mass.
Grover, J. W. & Son, 117 River st., Cleveland, Ohio.
Gurdy, H. O. & Co., 1 Camden st., Rockland, Me.
Haake, A. & C. Baasel, 29 Rector st., N. Y.
Haines & Hallock, 98 Hudson st., Jersey City, N. J.
Hansen, L. & Co., Wilmington, N. C.
Hare, C., 235 Spear st., San Francisco, Cal.
Harrison, John, & Co., 170 South st., N. Y.
Harvey & Tarr, Gloucester, Mass.
Hayden, Jno. H. & Co., 1 Coenties slip, N.Y.
Hayes, Edwin A., 262 West st., N.Y.
Hemmeter, J. C., 125 River st., Cleveland, O.
Hicks & Bell, 68 South st., N.Y.
Hilliard, J. D., Provincetown, Mass.
Hinchman, G. F. & Co., ft. of Woodward av., Detroit, Mich.
Hinckley Bros. & Co., 56-60 Commercial st., Boston, Mass.
Hincks & Neally, Bangor, Me.
Hinman, Wm. K., 169 South st., N.Y.
Hirschsprung, Axel, 110 Pearl st., N.Y.
Hite, W. W. & Co., 176-178 4th st., Louisville, Ky.
Horsier, H. & Co., Pensacola, Fla.
Hoyt, F. W. & Co., Fernandina, Fla.
Hutchinson, F., 2232 Boston st., Baltimore, Md.
Jansen & Co., 12 Bridge st., N.Y.
Johnson, C. W., 12th, c. Water st., Washington, D.C.
Jones, C. A. & Co., 50 South st., N.Y.
Jones & Birdsall, 203 West st., N.Y.
Josselyn, G. M. & Co., 38 Market st., San Francisco, Cal.
Kane's Nicholas Sons, 171 South st., N.Y.
Kelley, A. D., 132 S. Delaware av., Phila., Pa.
Kennett & Huey, 11 Delta st., New Orleans, La.
Ketchum, D. W., 50 S. Water st., Chicago, Ill.
Kingsland, J. O., 37 Old slip, N.Y.
Kimball, M., 905 S. B'way, Baltimore, Md.
Kirby, C. L., New Bedford, Mass.
Kirwin Bros., 133 Cheapside st., Baltimore, Md.
Knickerbocker, W. P. & Co., 88 S. Water st., Providence, R.I.
Knowles, G. O., Provincetown, Mass.
Kreimer, C. D., Duluth, Minn.
Lackey, Hugh & Son, 168 South st., N.Y.
Lagan, M. D., 6 Common st., New Orleans, La.
Larsen, Carl A., 13 Water st., N.Y.
Langlois & Son, Racine, Wis.
LeBrou Bros. & Co., 121 S. Gay st., Baltimore, Md.
Lee, J. H., 3228 Water st., Washington, D.C.
Lindsey, N. & Co., Alexandria, Va.
Loud, Claridge & Co., Smith's whf., c. Pratt st., Baltimore, Md.
Lowe, J., Jr., Key West, Fla.
Lyons, D. & Son, Oswego, N.Y.
Lyons & Besnard, 28 South st., N.Y.
McBride & Stafford, 12 Coenties slip, N.Y.
McCarthy & Marsh, Oswego, N.Y.
McDonald, Allen L., ft. of Duncan st., Gloucester, Mass.
McDonald, David, 154 South st., N.Y.
McLean's, D. W. Sons, 17 East st., N.Y.
Maltby, C. S. & Co., W. Falls av., c. Block st., Baltimore, Md.
Mason & Jencks, 266 S. Main st., Providence, R. I.
May, J. & Sons, 500 S. Delaware av., Philadelphia, Pa.
Mayo, T. L. & Co., 100 Commercial st., Boston. Mass.
Mercantile Wharf Co., Wellfleet, Mass.
Middleton & Co., 521 Front st., San Francisco, Cal.
Mighell, W. E., 102 Stewart st., San Francisco, Cal.
Miller, W. C. & Son, Charleston, S. C.
Mills, S. H. & Co., 107 South st., N.Y.
Milton, W., 118 Berry st., San Francisco, Cal.
Moir, J. & Co., Portland, Ore.
Montgomery, John H., 109 Ohio st., Buffalo, N. Y.
Munroe, G. H., Bay City, Mich.
Murphy, Jeremiah C., 7 South st., N.Y.
Neff, Barzillai G., 32 South st., N.Y.
Nelson, H. & Son., 908 Fell st., Baltimore, Md.
Newhall, Henry B. & Co., 105 Chambers st., N. Y.
Nippert, M. & Co., 163 4th st, Louisville, Ky.
Norris, G. D. & Co., Milwaukee, Wis.
Noyes, A. B., Fernandina, Fla.
Osmundson, H. & Co., 109 Broad st., N.Y.
Ostensen, O., 31 Stone st., N.Y.
Paine, J. & L. N., Provincetown, Mass.
Parker, J. R. & Co., 23 South st., N.Y.
Parker & Gemmel, 150 West st., N. Y.
Paulsen, N. & Co., Savannah, Ga.
Peed, F. M., Norfolk, Va.
Perley, Russell & Co., Portland, Me.
Peschau, E., & Westerman, Wilmington, N. C.
Peterson, A., 210 Gold st., Philadelphia, Pa.
Peterson, Otto L., 120 Broad st., N.Y.
Pfeiffer, H. & Co., Pensacola, Fla.
Phillips Bros., 87 Pearl st., N.Y.
Piccaluga, H. R., Decatur, c. St. Peter st., New Orleans, La.
Pierce & Johnson, Key West, Fla.
Plyer, Wm. H., 205 South st., N.Y.
Pollock, Alexander, 212 West st., N. Y. **32.**
Pulver, Peter & Sons, 257 West st., N.Y.
Purinton, R. H., 256 S. Main st., Providence, R. I.
Randall, Goodale & Co., 95 Commercial st., Boston, Mass.
Rankin, Alfred N., 26 South st., N. Y.
Reese, J., 217 Lodge st., Philadelphia. Pa.
Ricardo & Shafer, River rd., Phila., Pa.
Rider & Cotton, Portsmouth, N. H.
Riggins, Geo. B., 131 Av. D, N.Y.
Roberts, O. P. & Bro., 2200 Boston st, Baltimore, Md.
Rowe, E. L., Gloucester, Mass.
Ruge, H. & Sons, Apalachicola, Fla.
Sargent, Lord & Skillin, Portland, Me.
Savarese, V. & Bros., 11 Union st., Brooklyn, N. Y.
Sayer, J., Newport, R. I.
Schiaffino, G. & Co., 925 Fell st., Baltimore, Md.
Schickle, J. H. Bernard, 182 South st., N. Y.
Sciccaluga, G., 157 Decatur st., New Orleans, La.
Seaman, W. L., 131 Av. D, N. Y.
Slocardi, G., 38 Sacket st., Brooklyn, N. Y.
Simpson & Shaw, 27 Coenties sl., N. Y.
Sinzich, J. J., Evansville, Ind.
Shubert & Cottingham, 118 N. Delaware st., Philadelphia, Pa.
Slover & Tyler, 47 South st., N. Y.
Soto, M. P., Pensacola, Fla.
Spear & Hogan, 85 West st., N. Y.
Steffens, H., 937 Fell st., Baltimore, Md.
Stephenson, A B., Portland, Me.
Stoneman, M. G. & Son, 55 Quay st., Albany, N. Y.

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Struven, D., 1640 Thames st., Baltimore, Md.
Sullivan, Robert, 254 South st., N. Y.
Sutton, H., 485 Chapel st., New Haven, Conn.
Swan, W. H., 66 South st., N. Y.
Swan & Bushnell, 362 Water st., Bridgeport, Conn.
Swift & Allen, New Bedford, Mass.
Talmage, Harvey E., 233 West st., N. Y.
Thompson, C., 25 Ferris st., Brooklyn, N. Y.
Thurlow, B. T. & Son, 38 South st., N. Y.
Topping & Fox, 96 Chambers st., N. Y.
Train, Dorr & Co., 76 Commercial st., Boston, Mass.
Tubbs & Co., 611 Front st., San Francisco, Cal.
Upson, Walton & Co., 159 River st., Cleveland, Ohio.
Van Wagenen, Geo., 233 West st., N. Y.
Vaughan, G. T. & Co., Portsmouth, N. H.
Ward, Geo. E., 43 South st., N. Y.
Ward & Brady, 517 N. Levee st., St. Louis, Mo.
Watkins & Handy, New Bedford, Mass.
Webster, William E., 25 S. Water st., Chicago, Ill.
Wright, Bowne & Co., 34 Stewart st., San Francisco, Cal.
Westcott, J. H., Erie, c. Erie Canal st., Buffalo, N. Y.
White, C. & Co., 417 E. Pratt st., Baltimore, Md.
White & Co., 36 South st., N. Y.
Whiten & Case, Rockland, Me.
Whitelaw, T. P. H., ft. 2d st., San Francisco, Cal.
Whiton, M. F. & Co., 31 and 33 Commercial st., Boston, Mass.
Wilcox, M. I., 60 Water st., Toledo, O.
Williams, A. T., Provincetown, Mass.
Wilson, O. C. & K. R., 89 West st., N. Y.
Wilson, S., Cairo, Ill.
Windmuller, Louis, 16 Wells st., Chicago, Ill.
Wing, Robert B., 62 Quay st., Albany, N. Y.
Winsmore, T., 836 Swanson st., Phila., Pa.
Woodward, Wright & Co., 38 Canal st., New Orleans, La.
Worth, W. J., New Bedford, Mass.
Young, Wm., 171 Lewis st., N. Y.

Ship Joiners.

Baker, L. New Bedford, Mass.
Baxter, John H., 101 Market st., N. Y.
Brown, H., New Bedford, Mass.
Brown, J., 23 Old st., N. Y.
Coger, J. J., 480 Water st., N. Y.
Conlan, Michael, 302 Front st., N. Y.
Coombs, W. H., Rockland, Me.
Crew, Henry, 300 Front st., N. Y.
Cushman, F., 74 Sumner st., E. Boston, Mass.
Damon, D. W., New Bedford, Mass.
Donnell, E. C., 297 Commercial st., Boston, M.
Evans, W. O. & Co., Newburyport, Mass.
Fairbanks, Jonathan K., 261 West st., N. Y.
Guion, H., 737 E. 9th st., N. Y.
Harris, W. D., 1412 Philpot st., Baltimore, Md.
Hatch, L. M. & Son, Newburyport, Mass.
Huffmire, John E. & Son, 808 5th st., N. Y.
Jones, H. L., 87 Border st., Boston, Mass.
King, C. E., 11 Summit st., B'klyn, N. Y.
Lawrence, H., ft. Noble st., B'klyn, N. Y.
Lewis, J. G., Portland, Me.
Losee, V., 87 West st., N. Y.
McGovern, John F. & Son, 73 Rutgers st., N. Y.
McKie, W. H., 153 Border st., Boston, Mass.
Morris, C. T., 1830 Thames st., Baltimore, Md.
Parent, C. L., 232 Fremont st., San Francisco, Cal.
Peterson, S. & Co., 145 Border st., E. Boston, Mass.
Price, J. J. S., 103 Stewart st., San Francisco, Cal.
Robinson, W., 20 Stewart st., San Francisco, Cal.
Rowland, Wm., 811 E. 9th st., N. Y.
Russell, D. J., New Bedford, Mass.
Ryder, W. L., 303 Commercial st., Boston, M.
Scott, Thaddeus W., 216 West st., N. Y.
Simpson, J. J., 1315 Philpot st., Baltimore, Md.
Spofford, J. L., Main st., San Francisco, Cal.
Twogood, E., 173 Christopher st., N. Y.
Vanderveer, Tristam D., 812 5th st., N. Y.
Wagner, Lewis & Co., 119 S. Gay st., Baltimore, Md.
White, H. G., 20 Stewart st., San Francisco, Cal.

Ship Knees.

Barrett, Geo. & Co., Camden, N. J.

Shipsmiths.

Atkinson, W. H., 84 West st., N. Y.
Bakeler, E., 254 Tchoupitoulas st., New Orleans, La.
Barton, J., New Bedford, Mass.
Bassett, Z. & Son, 21 Eastern av., Boston, Mass.
Betts, C. H., 268 Conover st., Brooklyn, N. Y.
Boylan, M. F., 26 Washington st., Brooklyn, N. Y.
Bradley, J., 25 Ferris st., Brooklyn, N. Y.
Brown, Robert & Co., 101 Market st., N. Y.
Cassidy, T. F., Bangor, Me.
Champness, C., 39 Main st., Cleveland, O.
Chapman, P. P., 255 South st., N. Y.
Chase, J. J. & Son, 1414 Philpot st., Baltimore, Md.
Coffin & Hendry, 2 Market st., San Francisco, Cal.
Crockard, H., 20 Mission st., San Francisco, Cal.
Crocker, P., Provincetown, Mass.
Cullen & Carey, r. 212 West st., N. Y.
Dailey, J., 107 Columbia st., Brooklyn, N. Y.
Dean, H. A., New Bedford, Mass.
Donaldson Bros., North Branch, c. N. Halsted st., Chicago, Ill.
Driggs, J. D., New Bedford, Mass.
Dukeshire, P. C. & Son, ft. of 20th st., Brooklyn, N. Y.
Emery & Preble, 13 Sumner st., East Boston, Mass.
Ewart, L. F., 626 Manhattan av., Brooklyn, N. Y.
Fairbanks, E., 2630 Boston st., Baltimore, Md.
Fitch & Joy, 377 Commercial st., Boston, Mass.
Font & Sons, 275 Julia st., New Orleans, La.
Gaskell, Greenlie & Co., 253 South st., N. Y.
George, E. & Co., 82 South st., N. Y.
Glidden, G., 537 S. Peter st., New Orleans, La.
Godbold, James & Son, 18 James slip, N. Y.
Halket, George, Kinzie, c. Kingsbury st., Chicago, Ill.
Hall, C. D., New Haven, Conn.
Hall, H., Georgetown, Mass.
Hall's Isaac Son, 124 Broad st., N. Y.
Hanson, A. P., N. Halsted, S. E. cor. North Branch st., Chicago, Ill.
Harvey, G., Gloucester, Mass.
Hathaway, J., 116 Border st., East Boston, Mass.
Hathaway, S., 154 Border st., East Boston, Mass.
Hawkins, John, 160 Leroy st., N. Y.
Hergesheimer, A., 1000 Thames st., Baltimore, Md.
Higgins, T. L., ft. Harrison st., Brooklyn, N. Y.
Holder & Smith, ft. 20th st., Brooklyn, N. Y.
Home, J., 411 Van Brunt st., Brooklyn, N. Y.
Hubbard, T., 1341 Block st., Baltimore, Md.
Hughes, E. F., 18 Main st., Brooklyn, N. Y.
Johnson, Chas., 79 Illinois st., Chicago, Ill.
Johnson, E., 264 Marginal st., E. Boston, M.
Jones & Lewis, 252 South st., N. Y.
Kayne, W., 2204 Boston st., Baltimore, Md.
Kliner, John, 187 N. Water st., Chicago, Ill.
Kelly, James, 351 Stanton st., N. Y.
Kennett & Huey, 11 Delta st., New Orleans, La.
Keniston, J. R., 297 Border st., E. Boston, M.
Knight, James, 38 Corlears st., N. Y.
Lacour, A., 43 Main st., Cleveland, O.
Logan, M. D., 6 Common st., New Orleans, La.
Lane, Augustus R., 225 South st., N. Y.

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Langill, J. T., Imlay c. Summit st., B'klyn, N. Y.
Langrehr, H. C. & Co., 10 Brannan st., San Francisco, Cal.
Lanteri G. F. & Co., 899 Front st., San Francisco, Cal.
La Page, J., John, c. Gold st., B'klyn, N.Y.
Laughlin, T. & Son, Portland, Me
Lennon, J., 26 Folsom st., San Francisco, Cal.
Lewis, G. B., 91 Border st., E. Boston, Mass.
Lewis & Scott, 395 Atlantic av., Boston, Mass.
Livermore, J. H., Provincetown, Mass.
Lufkin, N., 1 Mill st., E. Boston, Mass.
McCresken, P., Oswego, N. Y.
McCurdy, A., East Gloucester, Mass.
McFarlane, R. M. W., 51 Atlantic av., Boston, Mass.
McKenzie, R., 16 St. Auburn av., Detroit, Mich.
McKeown & Quayle, 32 E. Kinzie st., Chicago, Ill.
McNamara, C., Elizabeth, nr. Richards st., B'klyn, N. Y.
McNaughton, D., 27-29 Lloyd st., Buffalo, N.Y.
Macy, E. B. & F., New Bedford, Mass.
Marsh, J., Charleston, S. C.
Mollison, J. C., 129 Berry st., San Francisco, Cal.
Morse, E. P., ft. 27th st., B'klyn, N.Y.
Muir, A., 1015 Battery st., San Francisco, Cal.
Murphy, John, 134 Broad st., N.Y.
Nute, A. H., Marginal st. at Jeffries pl., E. Boston, Mass.
Pay, C. & Co., 107-108 S. Water st., Providence, R. I.
Pendlington, Jas., Elizabeth, nr. Richards st., B'klyn, N.Y.
Penso, G., 131 Conover st., B'klyn, N.Y.
Phelps, W. S. & Co., 13 Drumm st., San Francisco, Cal.
Piccaluga, H. R., Decatur, c. St. Peter st., New Orleans, La.
Pogge, G., 3 N. Pier Atlantic Dock, B'klyn, N. Y.
Purdy, R., 442 S. Main st., Providence, R. I.
Ralt, J. W., Portsmouth, N. H.
Rennison & Brown, 38 Dover st., N. Y.
Riggin, J., 117 E. Cross st., Baltimore, Md.
Roberts, W., 69 Furman st., B'klyn, Y. Y.
Robinson, W. H., Gloucester, Mass.
Russell, T. N., ft. Cross st., Baltimore, Md.
Sawyer, J. A., New Bedford, Mass.
Sciaccaluga, G., 157 Decatur st., New Orleans, La.
Schmelzle & Mount, 395 South st., N. Y.
Small, I. A., Provincetown, Mass.
Smith, W. R., Hill's Wharf, Providence, R. I.
Snow, A. D., Provincetown, Mass.
Snow, J. M., New Bedford, Mass.
Stanwood, G. M. & Co., Portland, Me.
Stevens, J. C., Bath, Me.
Sullivan, S., 16 Columbia, st., Brooklyn, N.Y.
Swift, Joshua E., 173 Christopher st., N.Y.
Swinnerton, A. F., 230 Border st., Boston Mass.
Taylor, A., Provincetown, Mass.
Thompson, W., 387 Commercial st., Boston, Mass.
Union Dry Dock Co., Buffalo, N.Y.
Van Nostrand, W. A., Clement, c. Covington st., Baltimore, Md.
Voss, A., Gloucester, Mass.
Ward & Jackson, 49 Main st., Cleveland, O.
Watson, Thos., 390 11th av., N.Y.
Watt Iron Works, ft. Harrison st., Brooklyn, N. Y.
Wight, G. E., Bath, Me.
Woodward, Wight & Co., 42 Canal st., New Orleans, La.

Shipwork—Iron.

Jackson Architectural Iron Works, 315 E. 28th st., N. Y.

Shipwrights.

Albee & Jackson, 168 Border st., E. Boston, Mass.
Alexander, R. S., 223 Drumm st., San Francisco, Cal.
Allen, L. S., 103 Steuart st, San Francisco, Cal.
Bailey, B. M., Portsmouth, N. H.
Baldwin, F. J., 23 Chelsea st., Charlestown, Mass.
Beard, W. H., Elizabeth, n. Richards st., Brooklyn, N. Y.
Bennett, C. F., Water, n. 11th st., San Francisco, Cal.
Bigley, T. & Co., 27 Steuart st., San Francisco, Cal.
Boole, G., 5 Spear st., San Francisco, Cal.
Carter, Roberts & Co., Camden, N. J.
Clark & Webster, 22 Howard st., San Francisco, Cal.
Combs, J. H. & Co., 22 Spear st., San Francisco, Cal.
Cornish & Co., 256 South st, N. Y.
Costigen, E. A., 361 Commercial st., Boston, Mass.
Deering & Donnell, Bath, Me.
Dolbeare, W. L., 522 Atlantic av., Boston, Mass.
Dolliver, P. E., 299 Commercial st., Boston, Mass.
Downing & Lawrence, 28 Coenties sl., N.Y.
Endner, F. & Son., ft. Elizabeth st., Brooklyn, N. Y.
Farnham, J. H. & Co., 6 Folsom st., San Francisco, Cal.
Fredson, W. H., 264 Marginal st., E. Boston, Mass.
Gokey, W. & Son, Jersey City, N. J.
Green, W. F. & Son, 266 Border st., E. Boston, Mass.
Harrington, C. B., Bath, Me.
Jones, Isaac P., 62 South st., N. Y.
Keefe, James, 100 Market st., N. Y.
Kellough, T., 86 Border st., E. Boston, Mass.
Kelly, D. D. & Son, Marginal st., n. Sampson's Dry Dock, E. Boston, Mass.
Keough, R. F., 72 Border st., E. Boston, Mass.
Kerruish, E., 520 Battery st., San Francisco, Cal.
Kirkham, Henry P., 78 Broad st., N. Y.
Ladd, Jos. & Son, 11 Sumner st, E. Boston, Mass.
Leighton, E. D., 109 Sumner st., E. Boston, Mass.
Leighton, A. K. P. & Co., Portland, Me.
Lovejoy, E. B., 20 Stewart st., San Francisco, Cal.
McCarty, D., ft. 20th st., Brooklyn, N. Y.
Marquand, J. S. & J. H., Whidden's dock, Sumner st., E. Boston, Mass.
Middlemas & Boole, Pier 9, Steuart st., San Francisco, Cal.
Monroe, Murch & Co., 29 Sumner st., E. Boston, Mass.
O'Keefe, E., 40 Congress st, B'klyn, N. Y.
Pine, Samuel H., 241 South st, N. Y.
Poillon, C. & R., 224 South st., N. Y.
Reed, Andrew, 118 av. D, N. Y.
Robin, Henry, 85 Pike st., N. Y.
Rooney, Joseph, 101 Water st., N. Y.
Rosevelt & Griffith's, 257 South st., N. Y.
Ross, G., 6 Folsom st., San Francisco, Cal.
Sampson, G. S., 266 Commercial st., Boston, Mass.
Samson & Goodwin, 73 Rutgers st., N. Y.
Scott, W. B., 20 Atlantic av., Boston, Mass.
Shewan, James, ft. Stanton st., N. Y.
Sheppard & Fithian, Camden, N. J.
Sherwood, S. T., 70 South st., N. Y.
Stengrafe, A. & Co., 230 South st., N. Y.
Story, A., 47 Atlantic av., Boston, Mass.
Tebo, W. M., ft. 23d st., Brooklyn, N. Y.
Thomas, D., 40 Main st., San Francisco, Cal.
Thompson, C., 25 Ferris st., Brooklyn, N. Y.
Thorburn, Geo. & Co., 740 Water st., N. Y.
Townsend & Edgett, 66 New st., N. Y.
Trundy & Murphy, Smith, c. Halleck st., Brooklyn, N. Y.
Walsh, John F., Jr., 350 West st., N. Y.
Weston, J., 317 Commercial st., Boston, Mass.
Whelan, J. A. & Bros., 254 Spear st., San Francisco, Cal.

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Willcutt & Rowe, 5 Merchant st., San Francisco, Cal.
Winslow & Dyre, Portland, Me.
Worth, Peter, 379 West st., N. Y.
Yule & Munro, 13 Summit st., Brooklyn, N. Y.

Shipping—Manifold Blanks.

Barlow Bros., Grand Rapids, Mich. **49.**

Shovels, Spades & Scoops.

Ames, Oliver & Sons, 47 Equitable Bldg., Boston, Mass.
Birmingham Shovel Co., Derby, Conn.
Breed & Edwards, Pittsburgh, Pa.
Bruce, Geo. W., 24 Duane st., N. Y.
Chrisholm, Wm. & Sons, 358 Case av., Cleveland, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Clarkson, John W., 38 Reade st., N. Y.
Collins & Co., 212 Water st., N. Y.
Emery, Waterhouse & Co., North Monmouth, Me.
Esterbrook, Wm., 311 Cherry st., Phila., Pa.
French, Watson & Co., Hartford, Vt.
Gifford Mfg. Co., Watertown, N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Griffiths, Geo., 515 Locust st., Phila., Pa.
Groom Shovel Co., Duncan av. & Vandeventer st., St. Louis, Mo.
Herman—Parker Hardware Mfg. Co., St. Louis, Mo.
Hubbard & Co., 91 5th av., Pittsburgh, Pa.
Hussey, Binns & Co., 27th & Railroad sts., Pittsburgh, Pa.
Klein, Logan & Co., Pittsburgh, Pa.
Lehigh Mfg. Co., Bethlehem, Pa.
McCarty, J. C. & Co., 97 Chambers st., N. Y.
Marston, D. W., Lebanon, N. H.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Murray, Robt., 24 Duane st., N. Y.
Myers, H. M., & Co. (Ltd.), Beaver Falls, Pa.
Obermayer, The S. Foundry Supply Mfg. Co., Cincinnati, O.
Old Colony Iron Co., East Taunton, Mass.
Payne, Pettibone & Son, Wyoming, Pa.
Pfeiffer, John & Co., 224 Race st., Phila., Pa.
Quance & Miller, Oswego, N. Y.
Rogers, H. A., 19 John st., N. Y. **iv.**
Rowland, B. & Co., 516 Commerce st., Phila., Pa.
Rowland's, Thos. Sons, 12 N. 5th st., Phila., Pa.
Rowland, Maxwell & Co., 503 Commerce st., Phila., Pa.
St. Louis Shovel Co., St. Louis, Mo.
Sanford Forb & Tool Co., Terre Haute, Ind.
Saxton & Osgood, 31st & Lloyd sts., Buffalo, N. Y.
See, A., & Son, 1366 Broadway, N. Y.
Shepard, Sidney & Co., Buffalo, N. Y.
Thomas, R. B., 90 Chambers st., N. Y.
Weiss, Francis, Jr., South Bethlehem, Pa.
Wheeling Hinge Co., Wheeling, W. Va.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. **x.**

Shutters—Iron and Steel.

A. B. C. Fence Co., 83 Warren st., N. Y.
Althause, S. B. & Co., 101 Thompson st., N. Y.
Armstrong Bros., Springfield, O.
Berlin Iron Bridge Co., East Berlin, Conn.
Bolles, J. E. & Co., 80 Woodbridge st., Detroit, Mich.
Burnet & Co., 706 E. 12th st., N. Y.
Central Iron Works, 208 E. 30th st., N. Y.
Chambers & Macbeth, Cleveland, O.
Champion Iron Fence Co., Kenton, O.
Cheney & Hewlett, 201 B'way, N. Y.
Clark, Bennett & Co., 162 W. 27th st., N. Y.
Composite Iron Works, 83 Reade st., N. Y.
Cook & Radley, 214 E. 37th st., N. Y.
Cornell, J. B. & J. M., 141 Centre st., N. Y.
Dudley Shutter-Worker Co., 7 Beekman st., N. Y.
Excelsior Iron & Copper Works, Aurora, Ind.
Firke, J. W., 26 Park place, N. Y.
Gallagher, D. F. & Co., 223 Commercial st., Boston, Mass.
Ham, L. M. & Co., 158 Portland st., Boston, Mass.
Healy Iron Works, N. 4th & 5th sts., Brooklyn, N. Y.
Hollingshead, Chas. F., Camden, N. J.
Jackson Agricultural Iron Works, 315 E. 28th st., N. Y.
Lee, Holland & Co., Buffalo, N. Y.
Lindenschmidt, H. & G., Ingle st. & 1st av., Evansville, Ind.
Lindsay & Graff, 622 E. 14th st., N. Y.
Manley & Cooper Mfg. Co., 42d st. & Elm av., Phila., Pa.
Merker & Bro., 421-425 S. 6th st., St. Louis, Mo.
Riverside Bridge & Iron Works, Paterson, N. J.
Rogers, C. C., Trenton, N. J.
Ward, Wm. E. & Co., 495 Central av., Cincinnati, O.
Watson & Robinson, 32 Queen st., Germantown, Phila., Pa.
Westervelt, A. B. & W. T., 102 Chambers st., N. Y.
Wilson, James G., 953 B'way, N. Y.

*Signal Flags for Railroads.

Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
French, S. A., 400 Broome st., N. Y. **65.**

Signal Lights.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, N. Y.
Greeley, E. S. & Co. (The), 5 & 7 Dey st., N. Y.
Laclede Car Co., 4500 N. Second st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Smith, Josephine D., 350 Pearl st., N. Y.

Signals & Alarms for R. R. Crossings.

Allentown Rolling Mills (The), Allentown, Pa.
American Railroad Signal Co, Rochester, N. Y.
Bevington, C., Vermilion, O.
Detwiller & Street, 13 Dey st., N. Y.
Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa.; 2 Wall st., N. Y. **viii.**
Railroad Cab Electric Signal Co., 40 B'way, N. Y.
Union Switch & Signal Co., Garrison Alley & Duquesne Way, Pittsburgh, Pa.

Signals—Block—Automatic.

Allentown Rolling Mills (The), Allentown, Pa.
Baker, John E., 164 E. 125th st., N. Y.
Gould, John D., 9 Pearl st., Boston, Mass.
Nicholson Signal Co., Cincinnati, O.
Railway Cab Electric Signal Co., 40 B'way, N. Y.
Union Switch & Signal Co. (The), Swissvale, Pa.
Weir Frog Co., Front and Water sts., Cincinnati, O. **47.**
Wharton Railroad Switch Co., Phila., Pa.

*Signals—Car.

Brill, J. G. Co., Phila., Pa.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

The numbers following names indicate page on which the firm advertises.

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Signals—Electric Railway.

Gould, John D., 9 Pearl st., Boston, Mass.
Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa.; 2 Wall st., N. Y. **viii.**
Railway Cab Electric Signal Co., 40 B'way, N. Y.
Union Switch & Signal Co,, Swissvale, Pa.

Signals—Mining.

Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.
Shaw, Thos., 915 Ridge av., Phila., Pa.

*Semaphore Signals.

Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa.; 2 Wall st., N.Y. **viii.**

Signals—Ship Light.

Detwiller & Street, 12 Dey st., N. Y.

Sleeping Car Section (Improved).

Cutler, E. W., Boston, Mass.

Slate, and Roofing Slate.

Allen, S., Fair Haven, Vt.
Annifian Slate Trust, 9 Milk st., Boston, Mass.
Auld & Conger, 100 Euclid av., Cleveland, O.
Chapman Slate Co. (The), 505 West st., N. Y.
Connor, Chas. H., Clay, c. Franklin st., Louisville, Ky.
Galt, John & Son, 52 John st., N.Y.
Griffith & Nathaniel, Poultney, Vt.
Hazard Slate Co., Fair Haven, Vt.
Hower, F. M., Cherryville, Pa.
Jones, John & Co., Castleton, Vt.
Kinsely & Miller Bros., 129 S. Clinton st., Chicago, Ill.
Lobb, Wm., Pen Argyl, Pa.
Mesker & Bro., 421-425 S. 6th st., St. Louis, Mo.
Miller, Jos. S. & Bro., 1208 Ridge av., Philadelphia, Pa.
Northfield Black Slate Co., Northfield, Vt.
Northfield Slate & Tile Co., Northfield, Vt.
Old Lehigh Slate Co., 1026 Arch st., Philadelphia, Pa.
Owen Wyatt & Co., Baltimore, Md.
Palmer, Matthew & Miller, Bangor, Pa.
Pratt, D. C., 32 Church st., N. Y.
Saegersville Slate Quarrying & Mfg. Co., Slatington, Pa.
Stanley, Theodore, Poultney, Vt.
Stephens, Jackson & Co., Pen Argyl, Pa.
Story & Wilbur, 529 Commercial st., Boston, Mass.
Unger, John F., 1006 Mt. Vernon st., Philadelphia., Pa.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Williams Slate Co., 28 State st., Boston, Mass.

Slide Bars.

New Albany Steam Forge Co., New Albany, Ind.
Shaw, T., 915 Ridge av., Philadelphia, Pa.

Smoke Consumers.

Economy Fuel and Steam Co., 6 W. 3d st., Cincinnati, O.
Hutchinson Smoke & Spark Burner, 103 Adams st., Chicago, Ill.
Losee & Johnson, 297 W. 4th st., Cincinnati, O.
McLaughlin Smoke Consumer Co., 40 Borden Block, Chicago, Ill.
Norton, D. K., & Son, 2d & Elm sts., Cincinnati, O.
Orvis Smokeless Hydro-Carbon Furnace Co., 9 Lakeside Bldg., Chicago, Ill.
Schroll Smokeless Furnace Co., 80 La Salle st., Chicago, Ill.
Van Dusen, E. W., 104 E. 2d st., Cincinnati, O.

Smoke Stacks.

Bridgeport Boiler Works (The), Bridgeport, Conn.
Chicago Chimney Sweep Co., 165 E. Washington st., (Room 6), Chicago, Ill.
Collins, Wm. & Son, ft. W. 21st st., N.Y.
Dickson Mfg. Co., Scranton, Pa.
Duffy, James J., Waterbury, Conn.
Easterbrook, Wm., 311 Cherry st., Phila., Pa.
Gifford, Geo. T., Macon, Ga.
Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. **7.**
Hartman & Ertz, 94 Illinois st., Chicago, Ill.
Jarboe, J. & Son, 519 E. 19th st., N.Y.
Litchfield Car & Machine Co., Litchfield, Ill.
Lombard, Geo. R. & Co., Augusta, Ga.
Sharon Boiler Works, Sharon, Pa.
Sioux City Foundry and Machine Works, Sioux City, Ia.
South Bend Boiler Works, South Bend, Ind.
Wilfong Bros., 222 N. 23d st., Philadelphia, Pa.

Snow Fences.

Rathbun Co., Deseronto, Ont.

Snow Plows—Street R. R.

Andrews, Fraut H., 543 W. 33d st., N. Y.
Brill, J. G. Co., Phila., Pa.
Brooklyn R'y Supply Co. (The), 44 Walworth st., B'klyn, N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Day, Augustus, 22 Park pl., Detroit, Mich.
Hains Bros., 55 B'way, N. Y.
Johnson, Tom L., Indianapolis, Ind.
Lewis & Fowles Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N.Y. **52.**
Pugh & Russell, Stewart Bldg., N. Y.

Snow Shovels—Steam.

Rotary Steam Snow Shovel Mfg. Co., Paterson, N. J.; 115 B'way, N. Y.

Soapstone.

Butler, Philip H., & Co., 17 Haverhill st., Boston, Mass.
Fagan, John, 316 Pearl st., N. Y.
Fulloway, W. H., 132 Nicholas st., Phila., Pa.
Harrold, Theo., Dalton, Mass.
McIlvanie Bros., 15th & Hamilton sts., Phila., Pa.
Ramsdell, Wm. H., 90 Ann st., N. Y.
Righter, John A. & Co., William Penn, Pa.
Serene, J s. H., 4 Peck Slip, N. Y.
Solomon, L. A. & Bro., 216 Pearl st., N. Y.
Union Soapstone Co., Francestown, N. H.

Solder & Soldering Coppers.

Ajax Metal Co., 2040 N. 10th st., Phila., Pa.
Anderson, B. C. & Co., 87 Pike st., N. Y.
Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Blatchford, E. W. & Co., Chicago, Ill.
Boston Lead Mfg. Co., 162 Congress st., Boston, Mass.
Brooklyn Smelting & Refining Works, Driggs, bet. Union av. & Lorimer sts., B'klyn, E. D., N. Y.
Brower, Walter S., 12 Plain st., Albany, N. Y.
Bryant, J. H., 61-67 Michigan st., Chicago, Ill.
Cincinnati Lead Pipe & Sheet Lead Works, 21-23 E. 9th st., Cincinnati, O.
Colwell Lead Co., 63 Centre st., N. Y.
Crooke Smelting & Refining Co., 22 Burling st., N. Y.
Delaware Metal Refinery, 18th st. & Washington av., Phila., Pa.
Fleming & Hamilton, 61 3d av., Pittsburgh, Pa.
Fuller, Geo. H. & Son, Pawtucket, R. I.
Fullmer, A. J. & Co., Camden, N. J.
Holt, A. & Co., 120 Dorrance st., Pawtucket, R. I.

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Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Kahn Bros., 214 Front st., N. Y.
Lang, E. M. & Co., 71 Kennebec st., Portland, Me.
Merrie, Verhage & Co., 11-13 W. 7th st., Cincinnati, O.
Moare, Jones & Co., 1608 N. 8th st., St. Louis, Mo.
Mowry & Phillips, 120 Cross st., Boston, Mass.
N. Y. Smelting & Refining Co., Jane & West sts., N. Y.
Sanborn, John, 217 Water st., N. Y.
Schultz, A. & Co., 729-733 E. Pratt st., Balto., Md.
Shultz, A. & Co., 1 E. Pratt st., Baltimore, Md.
Stuckstelen & Co., 1312 S. 2d st., St. Louis, Mo.
Van Noorden, E. & Co., 383 Harrison av., Boston, Mass.
Weiss & Allen, 528 E. 20th st., N. Y.
White, S. S., Dental Mfg. Co., Chestnut & 12th sts., Phila., Pa.
Wildes, Thos., 246 Water st., N. Y.
Williams, E. A. & Son, 107 Plymouth st., Jersey City, N. J. **x.**

*Solicitors of Patents (R. R. & Electric).

Gooch, Chas., St. Cloud Bldg., Washington, D. C. **71.**
Whittlesey & Wright, Pacific Bldg., Washington, D. C.
Wiedersheim & Kintner, 919 Chestnut st., Phila., Pa.

Spar Makers.

Alger, Smith & Co., 100 Griswold st., Detroit, Mich.
Andrews, Moses L., Gloucester, Mass.
Andrews, Timothy S. & Co., Essex, Mass.
Barrett, Geo. & Co., Camden, N. J.
Beetle Rudolphus, New Bedford, Mass.
Grant, Anson F., Jersey City, N. J.
Johnson & Howland, New Bedford, Mass.
Rushton, J. H., Canton, N. Y.
Ryder & Smith, New Bedford, Mass.
Winant, Cornelius, 1 Gouverneur slip, N. Y.

Spark Arresters.

Albany Wire Works, Albany, N. Y.
Case, Levi & Co., Schenectady, N. Y.
Estey, W. Shepard, 71 Fulton st., N. Y.
Forest City Wire & Iron Works, 111 Franklin av., Cleveland, O.
Wright Wire Cloth Co., 52 Fulton st., N. Y.

Speed Recorders.

Ackley Speed Indicator Co., Warren, O.
American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Diamond Emery Wheel & Machine Co., Providence, R. I.
Emerson, Smith & Co., Beaver Falls, Pa.
McDonnell Odometer Co., 2 La Salle st., Chicago, Ill.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Mechanical News Co., 110 Liberty st. N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Railway Speed Recorder Co., Kent, O.
Woodman, R., 169 High st., Boston, Mass.

Spike Mfrs. (Iron & Steel).

Allentown Rolling Mills, 237 S. 3d st., Phila., Pa.
Ames, W. & Co., 312 Washington st., Jersey City, N. J.
Anchor Nail & Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Bailey, Chas. L., Harrisburg, Pa.
Barrows & Co., 64 B'way, N. Y.
Bellaire Nail Works, Bellaire, O.
Bellefonte Iron & Nail Co. (Ltd.), Bellefonte, Pa.
Berger Bros., 223 Arch st., Phila., Pa.
Billings & Spencer Co., Hartford, Conn.
Boonton Iron Works, Boonton, N. J.
Brooke, E. & G., Iron Co., Birdsboro, Pa.
Buck, M. M. & Co., 209 N. 3d st., St Louis, Mo.
Carey, Geo. H., 1 Broadway, N. Y.
Chicago Forge & Bolt Co., Chicago, Ill.
Clarkson, John W., 28 Read st., N. Y.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbus Bolt Works, Columbus, O.
Condit, Fuller & Co., Cleveland, O.
Corbin, P. & F., New Britain, Conn.
Cumberland Rolling Mill, Mount Clare, Baltimore, Md.
Dalmatia Nail & Iron Co., Dalmatia, Pa.
Damerel, George, 82 John st., N. Y.
Dilworth, Porter & Co. (Ltd.), Pittsburgh, Pa.
Drew, C. & Co., Kingston, Mass.
Drummond, M. J., 120 Broadway, N. Y.
Dubuar, J. A. & Co., Northville, Mich.
East Bridgewater Iron Co. (Rogers & Sheldon), 210 Congress st., Boston, Mass.
Fowler Rolling Mill Co., 185 Dearborn st., Chicago, Ill.
Fox, H. L. & Co., St. Louis, Mo.
Fuller Bros. & Co., 139 Greenwich st., N. Y.
Gilmor, Wm., President & Fawn sts., Baltimore, Md.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Greencastle Iron & Nail Co., Greencastle, Ind.
Hollidaysburg Iron & Nail Co., Hollidaysburg, Pa.
Hoopes & Townsend, Philadelphia, Pa.
Hotchkiss & Upson Co., Cleveland, O.
Houston Rolling Mills, Houston, Tex.
Hunt, A., 111 Mangin st., N. Y.
Jersey City Spike & Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Jones, Levin, Baltimore, Md.
Jones & Laughlin's (Ltd.), 3d av., c. Try st., Pittsburgh, Pa.
Junction Iron Co., Mingo Junction, O.; Wheeling, W. Va.
Juniata Rolling Mill (McLanahan, Smith & Co.), Hollidaysburg, Pa.
Kansas City Bolt & Nut Works, Kansas City, Mo.
Kansas City Switch & Frog Co., Kansas City, Mo.
Keefer, Horace A. & Co., 54 Sheldley Bl'g., Kansas City, Mo. **88.**
Kelly Nail & Iron Co., Ironton, O.
Kimball, D. B., Syracuse, N. Y.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Laramie Rolling Mills (F. E. Scrymser), Laramie City, W. T.
Lehigh Valley Spike Works, Allentown, Pa.
Lewis, Henry & Co., 234 S. 4th st., Phila., Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Philadelphia, Pa.
Mahoning Valley Iron Co., Youngstown, O.
Montour Iron & Steel Co., Danville, Pa.; 216 S. 3d st., Phila., Pa.
Moorhead Bros. & Co., Allegheny City, Pa.
Nelson, Abram, 205 Pearl st., N. Y.
New Albany Rail Mill Co., New Albany, Ind.
New Bedford Copper Co., New Bedford, Mass.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Oxford Iron & Nail Co., 81 Washington st., N. Y.
Penna. Bolt & Nut Co., Lebanon, Pa.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Plumb, Burdict & Barnard, Buffalo, N. Y.
Pottstown Iron Co., Pottstown, Pa.
Pottsville Spike, Bolt & Nut Co., Pottsville, Pa.
Railroad Spike Mfg. Co., Pullman, Ill.
Ramschasel, John, 917 Hanover st., Phila., Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Riverside Iron Works, Wheeling, W. Va.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Russell & Erwin Mfg. Co., 43 Chambers st., N. Y.; 19 N. 5th st., Phila., Pa.

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Schuylkill Haven Iron Co., Pottsville, Pa.; 120 Broadway, N. Y.
Severance, S., 53 Water st., Pittsburgh, Pa.
South Tredegar Iron Co., Chattanooga, Tenn.
Spaulding Iron Co., Brilliant, O.
Starke, Adolphe, 441 E. 10th st., N. Y.
Sylvester & Co., 6 Oliver st., Boston, Mass.
Terre Haute Iron & Nail Works, Terre Haute, Ind.
Tidewater Steel Works (Combination Steel & Iron Co.), Chester, Pa.
Tiebout, W. & J., 16 Chambers st., N. Y.
Timmens, P. & Son, 281 N. 6th st., Brooklyn, N. Y.
Top Mill (Whee ing Iron & Nail Co.), Wheeling, W. Va.
Torrey, J. G. & Son, 180 Main st., Rockland, Me.
Transue & Armstrong, Alliance, O.
Tredegar Iron Works (Tredegar Co.), Richmond, Va.
Troy Steel & Iron Co., Troy, N. Y.; 26 Broadway, N. Y.
Tudor Iron Works, 3d & St. Charles sts., St. Louis, Mo.
Virginia Nail & Iron Works Co., Lynchburg, Va.
Wallace, Wm. H. & Co., 131 Washington st., N. Y.
Western Iron Co., Rosedale, Kas.
Western Nail Co., Belleville, Ill.
Weymouth Iron Co., 134 Milk st., Boston, Mass.
Winch's Rolling Mill, (Spike & Bolt Works,) Phila., Pa.

Spikes—Boat and Ship.

Glendon Rolling Mill (Dilworth, Porter & Co., Ltd.), Pittsburgh, Pa.
Knoxville Iron Co., Knoxville, Tenn.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Syracuse Iron Works, Syracuse, N.Y.
Thornton, W. F., Wilshire Bldg., Cleveland, Ohio.
Torrey, J. G. & Son, Rockland, Me.

Spikes & Fastenings—Railroad.

Barrows & Co., 64 B'way, N.Y.
Buck & Co., M. M., 209 N. 35th st., St. Louis, Mo.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Colorado Coal & Iron Co., South Pueblo, Col.
Craig, Wm. P., 95 Liberty st., N.Y.
Diamond Slate Iron Co., Wilmington, Del.
Dilworth, Porter & Co., 8 Wood st., Pittsburgh, Pa.
Fowler Rolling Mill Co., 185 Dearborn st., Chicago, Ill.
Fulton Foundry, Cleveland, O.
Glendon Rolling Mill (Dilworth, Porter & Co., Ltd.), Pittsburgh, Pa.
Greeley, The E. S. Co., 5 & 7 Dey st., N.Y.
Hains Bros., 55 B'way, N.Y.
Hathaway & Robison, 14 Case Bldg., N.Y.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Humphreys & Sayce, 1 B'way, N.Y.
Johnson Steel Street Rail Co. (The), Johnstown, Pa. **55.**
Knoxville Iron Co., Knoxville, Tenn.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., N.Y.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Moundsville Rolling Mill, Moundsville, W. Va.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Penn Iron Co. (Ltd.), Lancaster, Pa.
Portland Rolling Mill, Portland, Me.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N.Y.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Schuylkill Haven Iron Co., 120 B'way, N.Y.
Severance, S., 53 Water st., Pittsburgh, Pa.
South Tredegar Iron Co., St. Louis, Mo.
Syracuse Iron Works, Syracuse, N.Y.
Thornton, W. F., Wilshire Bldg., Cleveland, Ohio.
Tredegar Iron Works, Richmond, Va.
Tudor Iron Works, 509 N. 3d st., St Louis, Mo.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Wharton, Wm., Jr. & Co. (Inc.), 25th st. and Wa hington av., Phila., Pa.

Spirit Levels.

Greene, Tweed & Co., 83 Chambers st., N.Y.
Richardson, O. F., Athol, Mass.
Stanley Rule & Level Co., 29 Chambers st., N.Y.

*Spittoons—Indurated Fibre.

Union Indurated Fibre Co., 37 Barclay st., N.Y., 39 Wabash av., Chicago, Ill.

Splice Bars.

Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Chicago Splice Bar Mill, 6 Ashland Block, Chicago, Ill.
Colorado Coal & Iron Co., South Pueblo, Col.
Jersey City Spike & Bolt Works (W. Ames & Co.), 312 Washington st., Jersey City, N. J.
Kinsley Iron & Machine Works, Canton, Mass.
Montour Iron & Steel Co., Danville, Pa.
Phila. & Reading Coal & Iron Co., Reading, Pa.
Pittsburgh Forge & Iron Co., 10th st. & Penn av., Pittsburgh, Pa.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. **72.**
Sellers & Co. (Morris), 6 Ashland Block, Chicago, Ill.
South Tredegar Iron Co., St. Louis, Mo.

*Sprinklers—Automatic.

Walworth Mfg. Co., 14 Oliver st., Boston, Mass.

Springs for Electric Instruments.

Cary & Moen, 234 W. 29th st., N. Y.
Phosphor-Bronze Smelting Co. (Ltd.), 512 Arch st., Phila. Pa.

Springs—Fish Plate.

Barnes, Wallace, Bristol, Conn.
Ruffner, Dunn & Co., Schuylkill Falls, Phila., Pa.

Springs—Piston.

Pollock, Alex., 212 West st., N. Y. **32.**
Tubular Barrow & Machine Co., 169 11th st., Jersey City, N. J. **32.**
Van Wagenen, Geo., 233 West st., N. Y.

Springs—Wire.

Bloom & Godley, Trenton, N. J.
Chicago Wire Spring Co., 171 Madison st., Chicago, Ill.
Cleveland Wire Spring Co., Cleveland, O.
Wolff, R. H., & Co., ft. E. 118th st., N. Y.

Squares—Iron & Steel.

Belcher Bros. & Co., 124 Green st., Newark, N. J.
Bridgeport Power Co., Bridgeport, Conn.

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Darling, Brown & Sharpe, Providence, R. I.
Eagle Square Mfg. Co., South Shaftsbury, Vt.
Kimball, C. E., 93 Oliver st., Boston, Mass.
Peck, Stow & Wilcox Co., Southington, Conn.
Southington Cutlery Co., Southington, Conn.
Standard Tool Co., Athol, Mass.
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Starrett, L. S., Athol, Mass.

Stamps—R. R. & Ticket Cancellers, Daters, Etc.

Anderson, W. H., & Son, 38 Clinton st., Detroit, Mich.
Childs, S. D., & Co., 163 Dearborn st., Chicago, Ill.
Conally, C. J., & Co., Rochester, N. Y.
Cooke, G. K. Mfg. Co., 92 Chambers st., N. Y.
Detroit Rubber Stamp Co., 52 Monroe st., Detroit, Mich.
Dimond, H. C. & Co., 22 Milk st., Boston, Mass.
Eagle Stamp Works, 199 Clark st., Chicago, Ill.
Hill, B. B. Mfg. Co. (The), 1016-1020 New Market st., Phila., Pa.
Hill, H. W. & Co., Decatur, Ill.
Hoggson & Pettis Mfg. Co., 64 Court st., New Haven, Conn.
Jones' Stationery & Printing Co. (J. M. W.), Dearborn and Monroe sts., Chicago, Ill.
Kavanagh & Galger, 5-11 Ann st., N. Y.
Michigan Printing Stamp Co., 74 Griswold st., Detroit, Mich.
Moeller, Henry, 9 Leonard st., B'klyn, N. Y.
Morgan, Crossman & Co., Springfie.d, Ill.
Murdoch, James, Jr., 165 Race st., Cincinnati, Ohio.
Nassau Stamp Works, 48-50 Fulton st., N. Y.
New York Stencil Works, 98-100 Nassau st., N. Y.
Reese, S. W. & Co., 29 Church st., N. Y.
Sawyer, W. W. & Co., Springfield, Mass.
Scotford Mfg. Co., 201 Nicollet av., Minneapolis, Minn.; 12 Dey st., N. Y.
Smith, R. H., Mfg. Co. (The), 291 Main st., Springfield, Mass.
Smith & Egge Mfg. Co (The), Bridgeport, Conn.
Stafford, A., 105 Fulton st., N. Y.
Stafford, Nelson, 66 Fulton st., N. Y.
Stutzman, J. M., 181 William st., N. Y.
Wellborne, S. H., 344 W. Main st., Louisville, Ky.
Zabriskie & Bennett, Detroit, Mich.

*Standard Measurement Implements.

Am. Standard Gauge & Tool Works, Wilmington, Del.

Staple Mfrs.

Adam, W. J., Joliet, Ill.
Adt, John & Son, Riverst., New Haven, Conn.
Albany Wire Works, Albany, N. Y.
Bushnell, Sereno S., New Haven, Conn.
Chisholm, Wm. & Sons, Cleveland, O.
Cobb & Drew, Plymouth, Mass.
Cooper, Hewitt & Co, 17 Burling Slip, N. Y.
Crawford, J. P., 304 Branch st., Phila., Pa.
Florence Tack Co., Florence, Mass.
Grundy & Disosway, 165 Greenwich st., N. Y.
Hartman Steel Co., Beaver Falls, Pa.
Hazard Mfg. Co., Wilkesbarre, Pa.
Hoag & Titchener, Binghamton, N. Y.
Iowa Barb Wire Co., Easton, Pa.
Jenkins, D. S., Brockton, Mass.
Keith & Trufant, Campello, Mass.
Larned, S. H., Worcester, Mass.
Meyer, Curt W., 357 4th av., N. Y.
Munson Mfg. Co., Lee, Ill.
New Haven Staple Works, 24 Artisan st, New Haven, Conn.
Phillips, E. & Sons, South Hanover, Mass.
Pickering, R. S., 306 Master st., Phila., Pa.
Quincy Floor Plate & Staple Mfg. Co., Quincy, Ill.
Ripley & Bartlett, Plymouth, Mass.
Rogers, C. B. & Co., Norwich, Conn.
Stanley Works, New Britain, Conn.
Washburn & Moen Mfg. Co., Worcester, Mass.
Wheeling Hinge Co., Wheeling, W. Va.
Wire Goods Co. (The), Worcester, Mass.
Wire Staple Co., 304 Branch st., Phila., Pa.

Stationery—R. R. and Street R. R.

Ketcham & Co., Chas. F., 29 Nassau st., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Wedelstanedt, Henry E., 113 E. 3d st., St. Louis, Mo.

*Steamboat Builders.

Harlan & Hollingsworth Co. (The), Wilmington, Del., and 115 B'way, N. Y.
Hohenstein Mfg. Co. (The), 49 Dey st., N. Y.
Neafie & Levy, Beach and Palmer sts., Phila., Pa. **26.**

Steam Launches.

Baldwin, G. H., Bradford, Ct.
Hays, Edwin A., 262 West st., N. Y.
Hohenstein Mfg. Co., 49 Dey st., N.Y.
Rushton, J. H., Canton, N.Y.
Warren, Paul B., South Providence, R. I.
Willard, C. P. & Co., 282 Michigan st., Chicago, Ill.

Steamship Builders—Iron and Steel.

Atlantic Works, 76 Border st., Boston, Mass.
Harlan & Hollingsworth Co. (The), Wilmington, Del.; 115 Broadway, N.Y.
Neafie & Levy, Beach and Palmer sts., Phila., Pa. **26.**
Pusey & Jones Co., Wilmington, Del.
Risdon Iron & Locomotive Works (Beale & Howard), San Francisco, Cal.
Union Iron Works, 216 Market st., San Francisco, Cal.

Steam Shovels, Excavators and Derricks

Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Hunt Co., C. W., 111 Broadway, N. Y.
Industrial Works, Bay City, Mich.
Marion Steam Shovel Co. (The), Marion, O.
Osgood Dredge Co., 37 State st., N. Y.; Potter Building, N. Y.
Pound Mfg. Co., Lockport, N. Y.
Vulcan Iron Works, Toledo, O.

Steam Shovels, Derricks, Etc., Second Hand.

Middleton, W. S., 52 John st., N.Y.
Saxten, J. C., 52 Broadway, N. Y.

*Steam Traps.

Curtis Regulator Co., 63 Beverly st., Boston, Mass. **30.**

Steel Balls.

Niagara Machine Co., Kensing Station, N.Y.

Steel Bar.

Ætna Iron & Steel Co., Bridgeport, O.
American Iron & Steel Works (Jones & Laughlins) (Ltd.), Pittsburgh, Pa.
Anchor Brand Axle Works (Sheldon Axle Co.), Wilkesbarre, Pa.
Beaver Falls Steel Works, Beaver Falls, Pa.
Black Diamond Steel Works (Park, Bro. & Co.) (Ltd.), Pittsburgh, Pa.
Bolton Steel Co. (The), Canton, O.
Brittingham, Juan F. & Co., Chichuahua, Mex.
Burgess, Chas., Titusville, Pa.
Burgess Steel & Iron Works, Portsmouth, O.
Calumet Iron & Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Cambria Steel-Cambria Iron Co., 218 S. 4th st., Philadelphia, Pa. **2.**

The numbers following names indicate page on which the firm advertises.

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Canton Steel Works, Bolton Steel Co., Canton, O.
Cartwright Iron & Steel Co., Steubenville, O.
Champion Steel & Iron Works, Springfield, O.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Chrome Steel Works, Kent av. & Keap st., Brooklyn, N.Y.
Clark, William & Co., Pittsburgh, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton Rolling Mill Co. (Graff, Bennett & Co.), Pittsburgh, Pa.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Condit, Fuller & Co., Cleveland, O.
Crerar, Adams & Co., Chicago, Ill.
Crescent Steel Works (Miller, Metcalf & Parkin), Pittsburgh, Pa.
Crown & Cumberland Steel Co. (Hicks & Dickey), 413 Commerce st., Phila., Pa.; Pittsburgh, Pa.
Disston & Sons, Henry, Tacony st., Phila., Pa.
Detroit Steel & Spring Works, 1st & Larned sts., Detroit, Mich.
Fairmount Steel Works (Alexander Foster & Co.), 2325 Spring Garden st., Phila., Pa.
Farist Steel Co., Bridgeport, Mass.
Findlay Iron & Steel Co., Findlay, O.
Fort Pitt Iron & Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Frankford Steel Co., Frankford, Phila., Pa.
Gautier Steel Dept Cambria Iron Co., Johnstown, Pa.; 523 Arch st., Phila.; 104 Reade st., N.Y.; Montauk Bldg., Chicago. **2.**
Globe Rolling Mill Co., Cincinnati, O.
Green Ridge Iron Works (A. L. Spencer), Scranton, Pa.
Hand, Barr & Co., Phila., Pa.
Hart, Wm. R., 402 Walnut st., Phila., Pa.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Hussey, Howe & Co. (Ltd.), Pittsburgh, Pa.; 3 Cliff st., N.Y.
James & Co., C E., Chattanooga, Tenn.
Jersey City Steel Co., Jersey City, N.J.
Jessup, Wm. & Sons, Boston, Mass.
Jones & Co., B. M., 13 Oliver st., Boston, Mass.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
La Belle Steel Works (Smith Bros. & Co.), Pittsburgh, Pa.
Lackawanna Iron & Coal Co., Scranton, Pa.
Liggett Spring & Axle Co. (Ltd.), Pittsburgh, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Logan, James H., Penn Bldg., Pittsburgh, Pa. **53.**
Mersick, C. S. & Co., New Haven, Conn.
Midvale Steel Co., Nicetown, Phila., Pa.
Millvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Monhagen Steel Works (Wheeler, Madden & Clemson Mfg. Co.), Middletown, N.Y.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
National Tube Works Co., McKeesport, Pa.
New Albany Rail Mill Co., New Albany, Ind.
Newark Steel Works (Benj. Atha & Co.), Newark, N.J.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill; 151 Insurance Block, Milwaukee, Wis.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Oliver Bros. & Phillips, Pittsburgh, Pa.
Onondaga Steel Works (Sweets' Mfg. Co.), Syracuse, N.Y.
Otis Iron & Steel Co., Cleveland, O.
Oxford Iron & Steel Works (Wm. & Harvey Rowland), Frankford, Phila., Pa.
Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa. **viii.**
Pittsburgh Steel Works (Anderson, Du Puy & Co.), 107 Wood st., Pittsburgh, Pa.
Pompton Steel & Iron Co., Pompton, N. J.
Ridgley, R. B., Detroit, Mich.
Riverside Iron Works, Wheeling, W. Va.
Roane Iron Co., Chattanooga, Tenn.
Roebling Sons Co. John A., Trenton, N. J.; 117 Liberty st., N. Y. **8.**
Sanderson Bros. Steel Co., Syracuse, N. Y.
Singer, Nimick & Co. (Ltd.), 83 Water st., Pittsburgh, Pa. **3.**
Smith Bros. & Co., Pittsburgh, Pa.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
Spang Steel & Iron Co. (Ltd.), Pittsburgh, Pa.
Springfield Iron Co.'s Iron and Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Star Iron Works (Bowen & Signor), Saranac, N. Y.
Syracuse Steel Foundry Co., Syracuse, N. Y.
Thornton, W. F., Wilshire Bldg., Cleveland, O.
Union Iron Mills (Carnegie, Bros. & Co. Ltd.), Pittsburgh, Pa.
Union Steel Co., 302 1st Nat. Bank Bldg., St. Louis, Mo.; Chicago, Ill.
Wallace, Wm. H. & Co., Albany and Washington sts., N. Y.
Warren, Salisbury & Nightingale, Providence, R. I.
Wayne Iron & Steel Works (Brown & Co.), Pittsburgh, Pa.
West Bergen Steel Works (Spaulding, Jennings & Co.), Jersey City, N. J.
Wetherell Bros., 21 Oliver st. and 115 Liberty st., N. Y.
Windsor Locks Steel Co., Bridgeport, Conn.
Youngstown Rolling Mill Co., Youngstown, O.
Zanesville Iron Works (Ohio Iron Co.), Zanesville, O.

Steel Beams, Channels and Angles.

Ætna Iron & Steel Works, 161 La Salle st., Chicago, Ill.
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
American Iron & Steel Works (Jones & Laughlin), (Ltd.), Pittsburgh, Pa.
Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 485th av., Pittsburgh, Pa
Champion Steel & Iron Works, Springfield, O.
Cleveland Rolling Mill Co., Cleveland, O.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Cooper, Hewitt & Co., 17 Burling Slip, N. Y.
Delaware Rolling Mill (F. P. Howe), Phillipsburgh, N. J.
Detroit Steel & Spring Works, 1st and Larned sts., Detroit, Mich.
Ewald Iron Co., St. Louis, Mo.
Fort Pitt Iron & Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Kloman, Andrew, Pittsburgh, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Midvale Steel Co., Nicetown, Phila., Pa.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.; 151 Insurance Block, Milwaukee, Wis.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.
Penn Bridge Co., Beaver Falls, Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. **viii.**
Pottsville Rolling Mills (Pottsville Iron & Steel Co.), Pottsville, Pa.
Pullman Iron & Steel Co., Pullman, Ill.; Pullman Bldg., Chicago, Ill.
Troy Steel & Iron Co., Troy, N. Y.; 26 Broadway, N. Y.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.

Steel Billets.

Bella ire Nail Works, Bellaire, O.

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Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Centralia Iron & Nail Works, Centralia, Ill.
Cleveland Rolling Mills, Cleveland, O.
Collins, H. E. & Co., 34 Lewis Block, Pittsburgh, Pa.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Columbus Steel Works, Columbus, O.
East Chicago Steel Works (M. M. Towle), Hammond, Ind.
Edgar Thomson Steel Works (Carnegie Bros., & Co., Ltd.), 48 5th av., Pittsburgh, Pa.
Eward Iron Co., St. Louis, Mo.
Jefferson Iron Works, Steubenville, O.
Keene Forge (W F. & S. H Weston), Keene, N. Y.
Laughlin & Junction Steel Co., Wheeling, W. Va.
Leishman & Snyder, Lewis Block, Pittsburgh, Pa.
Lickdale Iron Co., Lebanon, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Middleport Steel & Nails Works (King, Gilbert & Warner), Columbus, O.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. viii.
Pittsburgh Steel Casting Co., 26th & Railroad sts., Pittsburgh, Pa.
Pottsville Rolling Mills (Pottsville Iron & Steel Co.), Pottsville, Pa.
Riverside Iron Works, Wheeling, W. Va.
Scranton Steel Co., Scranton, Pa; 47 B'way, N. Y.
Star Iron Works (Bowen & Signor), Saranac, N. Y.
Troy Steel & Iron Co., Troy, N. Y.
Vulcan Works (Western Steel Co.), St. Louis, Mo.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Wheeling Steel Works, Wheeling, W. Va.
Worcester Steel Works, Worcester, Mass.
Youngstown Steel Co., Youngstown, O.

Steel Blooms & Slabs.

Bellaire Nail Works, Bellaire, O.
Burgess, Chas., Titusville, Pa.
Burgess Steel & Iron Works, Portsmouth, O.
Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Cleveland Rolling Mills, Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Collins, H. E. & Co., Lewis Block, Pittsburgh, Pa.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Columbus Steel Works, Columbus, O.
Edgar Thomson Steel Works (Carnegie Bros. & Co., Ltd.), 48 5th av., Pittsburgh, Pa.
Joliet Steel Co., Home Ins. Bldg., Chicago, Ill.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Laughlin & Junction Steel Co., Wheeling, W. Va.
Leishman & Snyder, Lewis Block, Pittsburgh, Pa.
Lickdale Iron Co., Lebanon, Pa.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Middleport Steel & Nail Works (King, Gilbert & Warner), Columbus, O.
Middlesex Rolling Mill (C. M. Raymond), West Middlesex, Pa.
Midvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
North Branch Steel Co., Danville, Pa.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Pennsylvania Steel Co., Steelton, Pa.; 208 S. 4th st., Phila., Pa. viii.
Pottsville Rolling Mills (Pottsville Iron & Steel Co.), Pottsville, Pa.
Rockaway Direct Process Iron & Steel Co., 32 Warren st., N.Y.
Shoenberger & Co., Pittsburgh, Pa.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.; 10 Wall st., N.Y.; 115 Dearborn st., Chicago, Ill.
Stewart Iron Co. (Ltd.), Sharon, Pa.
Troy Steel & Iron Co., Troy, N.Y.; 26 B'way, N.Y.
Vulcan Works (Western Steel Co.), St. Louis, Mo.
Walbaum, W. H. & Co., 206 S. 4th st., Phila., Pa.
Wheeling Steel Works, Wheeling, W. Va.
Worcester Steel Works, Worcester, Mass.

(Steel) Charcoal Blooms for Steel and Cast Steel.

Crown Point Iron Co., Crown Point, N.Y.
East Middlebury Iron Works (Williams & Nichols), East Middlebury, Vt.
Horico Iron Co., 24 Cliff st., N.Y.
Keene Forge (W. F. & S. H. Weston), Keene, N. Y.
Kimmswick Forge, Kimmswick, Mo.
Peru Steel Ore Co. (Ltd.), Clintonville, N. Y.
Peterburg Iron Works (Peter Tremblay), Clayburg, N.Y.
Rockaway Direct Process Iron & Steel Co., 32 Warren st., N.Y.
Sable Iron Works (J. & J. Rogers), Ausable Forks, N.Y.
Star Iron Works (Bowen & Signor), Saranac, N.Y.
Wilmington Forge (W. F. & S. H. Weston), Wilmington, N.Y.
Windham Forge (Geo. E. Righter), Parsippany, N. J.

Steel Manufacturers and Dealers.

Alden, J. F., Rochester, N. Y.
Apollo Iron & Steel Co., Pittsburgh, Pa.
Atkinson Car Spring Works, 189 La Salle st., Chicago, Ill.
Bissell, David S., Pittsburgh, Pa.
Boles Steel Car Wheel Works (The), Scranton, Pa.; 45 B'way, N.Y.
Brittingham & Co., Juan F., Chihuahua, Mexico.
Britton Iron & Steel Co., Cleveland, O.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Buffalo Steel Co., Buffalo, N. Y.
Buffalo Steel Foundry, Buffalo, N.Y.
Calumet Iron & Steel Co., Chicago, Ill.
Caleb, Fedder & Co., 1st av., ab. Fry st., Pittsburgh, Pa.
Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carbon Iron Co., Pittsburgh, Pa.
Carpenter, J. O., 390 Hudson st., N. Y.
Chester Steel Casting Co., 407 Library st., Phila., Pa. 46.
Chrome Steel Works, B'klyn, E. D., N.Y.
Claffy, John, 48 Dey st., N.Y. 91.
Collins, H. E. & Co., 34 Lewis Blk., Pittsburgh, Pa.
Cooper, Hewitt & Co., 17 Burling Slip, N.Y.
Crerar, Adams & Co., Chicago, Ill.
Crown & Cumberland Steel Co. (Hicks & Dickey), 413 Commerce st., Phila., Pa.
Detroit Bridge & Iron Works, Detroit, Mich.
Detroit Steel & Spring Works, Detroit, Mich.

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Dominion Bridge Co. (Ltd.), Lachine, P. Q.; Toronto, Ont.
Edge Moor Iron Co., 1600 Hamilton st., Phila., Pa.; Wilmington, Del.
Garrison, A., Foundry Co., 12 Wood st., Pittsburgh, Pa.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Greenbaum's, Michael, Sons, 9 Canal st., Chicago, Ill.
Hand, Burr & Co., 614 Market st., Phila., Pa.
Hart, Wm. R. & Co., 226 Walnut st., Phila., Pa.
Hobson, Francis & Son, 97 John st., N. Y.
Howard, Childs & Co., 20 Lewis Blk., Pittsburgh, Pa.
Jessop, Wm. & Sons (Ltd.), 163 Fort Hill sq., Boston, Mass.; 91 John st., N.Y.
Jones, B. M. Co., 13 Oliver st., Boston, Mass.
Keefer, Horace A. & Co., Kansas City, Mo. SS.
Kent, D. H. & Co. (Ltd.), 1009 Arch st., Phila., Pa.
Kimbark, S. D., Chicago, Ill.
Leishman & Snyder, Lewis Blk., Pittsburgh, Pa.
Leslie, A. C. & Co., Montreal, Que.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Mersick, C. S. & Co., New Haven, Conn.
Midvale Steel Co., Nicetown, Phila., Pa.
Miller, Metcalf & Parkin, Pittsburgh, Pa.; 480 Pearl st., N. Y.; 64 Clinton st., Chicago, Ill.
Milne, A. & Co., 60 Cedar st., N.Y.
Mo. Valley Bridge & Iron Works, Leavenworth, Kas.
Morse Bridge Co., Youngstown, O.
National Car Spring Co., 13 Barclay st., N. Y.
Neal Bros., 612 Liberty st., Pittsburgh, Pa.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Ogden & Wallace, 85 Elm st., N. Y.
Otis Iron & Steel Co., Cleveland, O.
Oxford Iron & Steel Works (Wm. & Harvey Rowland), Frankford, Phila , Pa.
Park Bro. & Co. (Ltd.), Pittsburgh, Pa.
Parke & Lacy, 23 Fremont st., San Francisco, Cal.
Penn Bridge Co., Beaver Falls, Pa.
Pope & Bro., Thos. J., 292 Pearl st., N.Y.
Pratt & Letchworth, Buffalo, N. Y.
Ridgley, R. B., 42 Woodbridge st., Detroit, Mich.
Ringler, F. A. & Co., 21-23 Barclay st., N.Y.
Roberts & Co., A. & P., 261 S. 4th st., Philadelphia, Pa.
Seaman, Sleeth & Black, 41st st., Pittsburgh, Pa.
Shiffler Bridge Works, Pittsburgh, Pa.
Shoenberger & Co., Pittsburgh, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. 3.
Smith Bros. & Co., Pittsburgh, Pa.
Standard Steel Works, 220 S. 4th st., Philadelphia, Pa.
Stroud & Co., 104 John st., N.Y.
Troy Steel & Iron Co., Troy, N.Y.; 26 B'way, N.Y.
Wallace & Co., Wm. H., 131 Washington st., N. Y.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Warren, Salisbury & Nightingale, Providence, R. I.
Wessel, Agustus, 58 W. 2d st., Cincinnati, O.

Steel and Iron Hulls.

Carroll & Co., D. W. C. (Ltd.), 310 Liberty st., Pittsburgh, Pa.

*Steel Importers.

Abbott, Jere & Co., Boston, Mass.
Cambridge Rolling Mills, Cambridgeport, Mass.
Colville, David & Sons, Motherwell, Scotland, Geo. B. Douglass Agt., 115 Broadway, N.Y.
Danvers Iron Works (Arthur G. Tompkins & Co.), 10 Oliver st., Boston, Mass.
Davis, James V., 115 Liberty st., N. Y.
Douglass, Geo. B., 115 Broadway, N.Y.
Frasse & Co., 92 Park Row, N.Y.
Hobson, Francis & Son, 97 John st., N. Y.
Houghton & Richards, 150 Oliver st., Boston, Mass.
Jessop, Wm. & Sons, 91 John st., N. Y.
Jones, B. M. & Co., 13 Oliver st., Boston, Mass.
Krupp, Fried (firm of), 15 Gold st., N.Y.
Lee, James & Co., 72 Pine st., N.Y.
Lindsay, Parvin & Co., Philadelphia, Pa.
Montgomery & Co., 105 Fulton st., N.Y.
Naylor & Co., 99 John st., N. Y.
Newton & Shipman, 83 John st., N. Y.
Page, Newell & Co., Boston Mass.
Parks, James B., 8 Burling sl., N. Y.
Pierson & Co., 24 West st., N. Y.
Prosser, Thos. & Son, 15 Gold st., N. Y.
Scranton Steel Co., 47 Broadway, N. Y.
Stroud & Co., 104 John st., N. Y.
Wardlow, S. & C., 95 John st., N. Y.
Warren, Salisbury & Nightingale, Providence, R. I.
Weir, Rogers & Co., 45 Broadway, N. Y. 5.
Wetherell Bros., 115 Liberty st., N. Y.
Whitney, A. R. & Co., 17 Broadway, N. Y.

*Steel—R. Mushets Special.

Jones, B. M. & Co., 13 Oliver st., Boston, Mass.

Steel Plates.

Ætna Iron & Steel Co., Bridgeport, O.
Allegheny, Monongahela & Birmingham Iron Works (Oliver, Bros. & Phillips), Pittsburgh, Pa.
American Iron & Steel Works (Jones & Laughlins, Ltd.), Pittsburgh, Pa.
American Nail & Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Anchor Nail & Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Apollo Iron & Steel Co., Pittsburgh, Pa.
Bay State Iron Co , 12 Pearl st., Boston, Mass.
Beaver Falls Steel Works, Beaver Falls, Pa.
Belleville Nail Co., Belleville, Ill.
Bethlehem Iron Co., Bethlehem, Pa.
Black Diamond Steel Works (Park, Bro. & Co., Ltd.), Pittsburgh, Pa.
Bolton Steel Co., Canton, O.
Boston Car Wheel Co., 1st & I sts., Boston, Mass.
Brandywine Rolling Mills (Worth Bros), Coatesville, Pa.
Britton Iron & Steel Co., Cleveland, O.
Brown & Co., Pittsburgh, Pa.
Burgess Steel & Iron Co., Portsmouth, O.
Calumet Iron & Steel Co. (1st Nat. Bank Bldg.), Chicago, Ill.
Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Canton Steel Works (Bolton Steel Co.), Canton, O.
Carnegie Bros. & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co. (Ltd.), 48 5th av., Pittsburgh, Pa.
Catasauqua Mfg. Co., Catasauqua, Pa.
Central Iron Works, Harrisburg, Pa.
Centralia Iron & Nail Works, Centralia, Ill.
Chester Rolling Mills, Thurlow, Pa.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Christiana Rolling Co., Wilmington, Del.
Chrome Steel Works, Kent av. and Keep st., Brooklyn, N. Y.
Cleveland Rolling Co., Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Clinton & Midvale Rolling Mills (Graff, Bennett & Co.), Pittsburgh, Pa.
Coatesville Iron Works, Coatesville, Pa.
Collins Co., Collinsville, Conn.
Columbus Steel Co., Columbus, O.

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Crescent Steel Works (Miller, Metcalf & Parkin), Pittsburgh, Pa.
Crown & Cumberland Steel Co. (Hicks & Dickey, 413 Commerce st., Phila., Pa.
Detroit Steel & Spring Works, Detroit, Mich.
Disston & Sons, Henry, Tacony, Phila., Pa.
Eagle Rolling Mill & Tube Works, Pittsb'g, Pa.
East Chicago Steel Works (M. M. Towle), Hammond, Ind.
Fairmount Steel Works (Alex. Foster & Co.), 2325 Spring Garden st., Phila., Pa.
Farist Steel Co., Bridgeport, Conn.
Fort Pitt Iron & Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Gautier Steel Dept. Cambria Iron Co., Johnstown, Pa.; 523 Arch st., Phila., Pa.; 104 Reade st., N. Y.; Montauk Block, Chicago, Ill. **2.**
Glasgow Iron Works, Pottstown, Pa.
Globe Rolling Mill Co., Cincinnati, O.
Glove, Grier & Co, 330 Walnut st., Phila., Pa.
Henderson Steel & Mfg. Co., Birmingham, Ala.
Homestead Steel Works (Carnegie, Phipps & Co., Ltd.), 48 5th av., Pittsburgh, Pa.
Hussey, Howe & Co (Ltd.), Penn av. & 17th st., Pittsburgh, Pa.; 3 Cliff st., N. Y.
Indianapolis Rolling Mill Co, Indianapolis, Ind.
Jersey City Steel Co., Jersey City, N. J.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Kensington Iron & Steel Works (James Rowland & Co.), 920 N. Delaware av., Phila., Pa.
Keystone Saw, Tool, Steel & File Works (Henry Disston & Sons), Tacony, Phila., Pa.
La Belle Steel Works (Smith, Bros. & Co.), Pittsburgh, Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.
Leechburg Iron Works (Kirkpatrick & Co., Ltd.), Leechburg, Pa.
Lickdale Iron Co., Lebanon, Pa.
Linden Steel Co. (Ltd.), 163 Smithfield st., Pittsburgh, Pa.
Locust Point Iron & Steel Works (Coates & Co.), Baltimore, Md.
Lukens Rolling Mills (Chas. Huston & Sons), Coatesville, Pa.
McIlvain, Wm. & Sons, Reading, Pa.
Midvale Steam Co., Nicetown, Phila., Pa.
Midvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Mitchell, Iranter & Co., 2d & Elm sts., Cincinnati, O.
Monhagen Steel Works (Wheeler, Madden & Clemson Mfg. Co.), Middletown, N. Y.
Nashua Iron & Steel Co., Nashua, N. H.; 67 Liberty st., N. Y. **56.**
National Tube Works Co., McKeesport, Pa.
Nellis's Agricultural Works (A. J. Nellis Co.), Pittsburgh, Pa.
Newark Steel Works (Benj. Atha & Co.), Newark, N. J.
New Phila. Iron & Steel Co., New Phila., O.
North Branch Steel Co., 330 Walnut st., Phila., Pa.; Danville, Pa.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Otis Iron & Steel Co., Cleveland, O.
Oxford Iron & Steel Co. (Wm. & Harvey Rowland). Frankford, Phila., Pa.
Pacific Rolling Mill Co., 202 Market st., San Francisco, Cal.
Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.
Pennsylvania Iron & Steel Works (W. J. Hammond & Sons, Ltd.), Pittsburgh, Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. **viii.**
Phœnix Iron Co., 410 Walnut st., Phila., Pa.
Pine Iron Works (Jos. L. Bailey & Son), Pine Iron Works P. O., Pa.
Pittsburgh Steel Works (Anderson, Du Puy & Co.), 107 Wood st., Pittsburgh, Pa.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Pompton Steel & Iron Works, Pompton, N. J.
Portsmouth Iron & Steel Works, Ashland, Ky.; Portsmouth, Ohio.
Pottstown Iron Co., Pottstown, Pa.
Riverside Iron & Steel Co., Cincinnati, O.
Roane Iron Co., Chattanooga, Tenn.
Schuylkill Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.
Shoenberger & Co., Pittsburgh, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. **2.**
Soho Iron Mills (Moorhead-McCleane Co., Pittsburgh, Pa.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
Spang Steel & Iron Co (Ltd.), Pittsburgh, Pa.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.
Swift's Iron & Steel Works, Newport, Ky.
Thorndale Iron Works Co., Thorndale, Pa.
Thornton, W. F., Wilshire Bldg., Cleveland, Ohio.
Tremont Nail Co., West Wareham, Mass.
Tyler Bros., 12-14 Cliff st., N.Y.
Union Iron Mills (Carnegie Bros. & Co., Ltd.), Pittsburgh, Pa.
U. S. Iron & Tin Plate Co. (Ltd.), Demmler P. O., n. McKeesport, Pa.
Washburn & Moen Mfg. Co., Worcester, Mass.
Western Nail Co., Belleville, Ill.
West Penn Steel Works (Jennings, Beale & Co) (Ltd.), Pittsb'g, Pa.
Wheeling Steel Works, Wheeling, W. Va.
Wilmington Rolling Mills (Seidel & Hastings Co.), Wilmington, Del.
Windsor Locks Steel Co., Bridgeport, Conn.
Woodward Iron Co., Wheeling, Ala.
Worcester Steel Works, Worcester, Mass.
Youngstown Steel Co., Youngstown, O.
Zanesville Iron Works (Ohio Iron Co.), Zanesville, O.

Steel—Sheet.

Ætna Iron & Steel Co, Bridgeport, O.
American Iron & Steel Works (Jones & Laughlins, Ltd.), Pittsburgh, Pa.
Apollo Iron & Steel Co. (P. H. Laufman & Co., Ltd.), Pittsburgh, Pa.; Apollo, Pa.
Black Diamond Steel Works (Park, Bro. & Co., Ltd), Pittsburgh, Pa.
Brittingham, Juan F. & Co., Chihuahua, Mex.
Britton Iron & Steel Co., Cleveland, O.
Canonnsburgh Iron & Steel Co., Cannonsburgh, Pa.
Chartiers Iron & Steel Co. (Ltd.), Pittsburgh, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Clinton Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Crerar, Adams & Co., Chicago, Ill.
Disston, Henry & Sons, Tacony, Phila., Pa.
Everson, Hammond & Orr (Ltd), 2d av., Pittsburgh, Pa.
Hand, Burr & Co., 614 Market st., Phila., Pa.
Haselton Iron Works (Andrews Bros. & Co.), Youngstown, O.
Hussly, Howe & Co. (Ltd.), Penn av. and 17th st., Pittsburgh, Pa.; 3 Cliff st., N. Y.
Irondale Rolling Mill (Banfield & Co.), (Ltd.), Irondale, O.
Jennings, Beale & Co., Pittsburgh, Pa.
Jessop, Wm. & Sons (Ltd), 163 Fort Hill sq., Boston, Mass.; 91 John st., N. Y.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Keystone Saw, Tool, Steel & File Works (Henry Disston & Son), Tacony, Phila., Pa.
Laclede Rolling Mills (Chouteau, Harrison & Valle Iron Co.), 204 N. 3d st., St. Louis, Mo.

The numbers following names indicate page on which the firm advertises.

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Leechburg, Iron Works (Kirkpatrick & Co.), (Ltd.), Leechburg, Pa.
Leslie, A. C. & Co., Montreal, Que.
Linden Steel Co. (Ltd.), Pittsburgh, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Merwick, C. S. & Co., New Haven, Conn.
Midvale Rolling Mill (Graff, Bennett & Co.), Pittsburgh, Pa.
Mitchell, Tranter & Co., Cincinnati, O.
Myers, H. M. & Co. (Ltd.), Beaver Falls, Pa.
New Phila. Iron & Steel Works, New Phila., Ohio.
Newport Rolling Mills (Marshall Iron Co.), Newport, Del.
Norway Steel & Iron Co., 6 Oliver st., Boston, Mass.
Park & Lacy, 23 Fremont st., San Francisco, Cal.
Pittsburgh Steel Works (Anderson, Du Puy & Co.), 107 Wood st., Pittsburgh, Pa.
Plymouth Rolling Mill Co., Conshohocken, Pa.
Portsmouth Iron & Steel Works, Portsmouth, Ohio.
Ridgley, R. B., 42 Woodbridge st., Detroit, Mich.
Riverside Iron & Steel Co., Cincinnati, O.
Schuylkill Iron Works (Alan Wood Co.), 519 Arch st., Phila., Pa.
Singer, Nimick & Co., Pittsburgh, Pa. 3.
Soho Iron Mills (Moorhead, McCleane Co.), Pittsburgh, Pa.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.; 10 Wall st., N. Y.; 115 Dearborn st., Chicago, Ill.
Standard Iron Co., Bridgeport, O.
Swift's Iron & Steel Works, Newport, Ky.
Troy Steel & Iron Co., Troy, N. Y.; 26 B'way, N.Y.
U. S. Iron & Tin Plate Co. (Ltd.), Demmler P. O., nr. McKeesport, Pa.
Wallace, Wm. H. & Co., 131 Washington st., N. Y.
Warren, Salisbury & Nightingale, Providence, R. I.
Wessel, Augustus, 58 W. 2d st., Cincinnati, O.
West Penn Steel Works (Jennings, Beale & Co.) (Ltd.), 43 6th av., Pittsburgh, Pa.
Whitaker Iron Co., 12 Cliff st., N. Y.; Wheeling, W. Va.

Steel Slot Beams for Cable Roads.

New Albany Rail Mill Co., New Albany, Ind.

Steel—Tool.

Beaver Falls Steel Works, Beaver Falls, Pa.
Bolton Steel Co., Canton, O.
Burgess, Chas., Titusville, Pa.
Burgess Steel & Iron Works, Portsmouth, O.
Cambridge Rolling Mills, Cambridgeport, Mass.
Canton Steel Works, Bolton Steel Co., Canton, O.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Chrome Steel Works, Kent av. & Keep st., Brooklyn, N. Y.
Cleveland Rolling Mill Co., Cleveland, O.
Crescent Steel Works (Miller, Metcalf & Parkin), Pittsburgh, Pa.
Crown & Cumberland Steel Co. (Hicks & Dickey), 413 Commerce st., Phila., Pa.
Detroit Steel & Spring Works, 1st & Larned sts., Detroit, Mich.
Ewald Iron Co., St. Louis, Mo.
Frankford Steel Co., Frankford, Philadelphia, Pa.
Gautier Steel Dept. Cambria Iron Co., Johnstown, Pa.; 523 Arch st., Phila.; 104 Read st., N.Y., Montauk Bld., Chicago. 2.
Hussey, Binns & Co. (Ltd.), Pittsburgh, Pa.
Hussey, Howe & Co. (Ltd.), Penn av. & 17th st., Pittsburgh, Pa.; 3 Cliff st., N. Y.
James & Co., C. E., Chattanooga, Tenn.
Jessop, Wm. & Sons, 91 John st., N. Y.
Jones, B. M. & Co., 13 Oliver st., Boston, Mass.
Ling, John S., 4 Fletcher st., N. Y.
Lewander & Co., 126 State st., Boston, Mass.
Linden Steel Co. (Ltd.), Lewis Bldg., Pittsburgh, Pa.
Midvale Steel Co., Nicetown, Phila., Pa.
Nellis's Agricultural Works (A. J. Nellis Co.), Pittsburgh, Pa.
North Branch Steel Co., Danville, Pa.
Pennington, Geo. W. & Sons, 219 Main st., San Francisco, Cal.
Pittsburgh Steel Works (Anderson, DuPuy & Co.), 107 Wood st., Pittsburgh, Pa.
Pompton Steel & Iron Co., Pompton, N. J.
Sanderson Bros., Steel Co., Syracuse, N.Y.
Singer, Nimick & Co. (Ltd.), 83 Water st., Pittsburgh, Pa. 3.
Smith Bros. & Co., Pittsburgh, Pa.
Solar Iron & Steel Works (Wm. Clark's Son & Co.), Pittsburgh, Pa.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
Sterling Steel Co. (Ltd.), 415 5th av., Pittsburgh, Pa.
Thornton, W. F., Wilshire Bldg., Cleveland, O.
Troy Steel & Iron Co., Troy, N. Y.; 26 Broadway, N.Y.
West Bergen Steel Works (Spaulding, Jennings & Co.), Jersey City, N. J.
Wetherell Bros., 21 Oliver st., Boston, Mass.; 115 Liberty st., N.Y.

Steel Works.

Ætna Iron & Steel Works, 161 La Salle st., Chicago, Ill.
Allegheny, Monongahela & Birmingham Iron Works (Oliver Bros. & Phillips), Pittsburgh, Pa.
American Iron & Steel Works (Jones & Laughlins), (Ltd.), Pittsburgh, Pa.
Ames Mfg. Co., 33 Pemberton sq., Boston, Mass.
Beaver Falls Steel Works, Beaver Falls, Pa.
Bellaire Nail Works, Bellaire, O.
Belleville Nail Co., Belleville, Ill.
Bethlehem Iron Co., Bethlehem, Pa.
Birdsboro Nail Works (E. & G. Brooke Iron Co.), Birdsboro, Pa.
Black Diamond Steel Works (Park Bro. & Co.), (Ltd.), Pittsburgh, Pa.
Burgess, Chas., Titusville, Pa.
Burgess Steel & Iron Works, Portsmouth, O.
Cambria Steel—Cambria Iron Co., 218 S. 4th st., Phila., Pa. 2.
Carnegie Bros. & Co., 48 5th av., Pittsburgh, Pa.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Centralia Iron & Nail Works, Centralia, Ill.
Chicago Crucible Steel Casting Co., 1326 Indiana av., Chicago, Ill.
Chrome Steel Works (Kent av. and Keep st.), Brooklyn, N. Y.
Cleveland Rolling Mill Co., Cleveland, O.
Collins Co., Collinsville, Conn.
Colorado Coal & Iron Co., South Pueblo, Col.
Columbia Iron & Steel Co., Pittsburgh, Pa.
Crescent Steel Works (Miller, Metcalf & Parkin), Pittsburgh, Pa.
Crown & Cumberland Steel Co., Pittsburgh, Pa.
Detroit Steel & Spring Works, 1st and Larned sts., Detroit, Mich.
Disston, Henry & Sons, Tacony, Phila., Pa.
Duquesne Steel Co., Pittsburgh, Pa.
East Chicago Steel Works, Hammond, Ind.
Edgar Thompson Steel Works (Carnegie, Bros. & Co.), (Ltd.), 48 5th av., Pittsburgh, Pa.
Fairmount Steel Works (Alex. Foster & Co.), 2325 Spring Garden st., Phila., Pa.
Farist Steel Co., Bridgeport, Conn.
Fort Pitt Foundry (Mackintosh, Hemphill & Co.), (Ltd.), Pittsburgh, Pa.
Fort Pitt Iron & Steel Works (Carbon Iron Co.), Pittsburgh, Pa.
Frankford Steel Co., Frankford, Phila., Pa.
Hartmann Steel Co., Beaver Falls, Pa.

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Hellar & Bros., Newark, N J.
Homestead Steel Works (Carnegie, Phipps & Co.) (Ltd.), Pittsburgh, Pa.
Hussy, Binns & Co., (Ltd.), Pittsburgh, Pa.
Hussy, Howe & Co. (Ltd.), Pittsburgh, Pa.
Jefferson Iron Works, Steubenville, O.
Jersey City Steel Co , Jersey City, N. J.
Johnson, Isaac G. & Co., Spuyten Duyvil, N.Y.
Joliet Steel Works, Home Ins. Bldg., Chicago, Ill.
Juniata Iron & Steel Works (Shoenberger & Co.), Pittsburgh, Pa.
La Belle Steel Works (Smith Bros. & Co.), Pittsburgh, Pa.
Lackawanna Iron & Steel Works, Scranton, Pa.
Laughlin & Junction Steel Co., Wheeling, W. Va.; Mingo Junction, O.
Middleport Steel & Nail Works (King, Gilbert & Warner), Columbus, O.
Midvale Steel Co., Nicetown, Phila., Pa.
Monhagen Steel Wo ks (Wheeler, Madden & Clemson Mfg. Co.). Middletown, N. Y.
Nellis' Agricultural Works (A. J. Nellis Co.), Pittsburgh, Pa.
Newark Steel Works (Benj. Atha), Newark, N J.
North Branch Steel Co., Danville, Pa.
North Chicago Rolling Mill Co., 17 Metropolitan Block, Chicago, Ill.
Old Dominion Iron & Nail Works Co., Richmond, Va.
Otis Iron & Steel Co., Cleveland, O.
Oxford Iron & Steel Works, Wm. & Harvey Rowland, Frankford, Phila., Pa.
Pennsylvania Steel Co., 208 S. 4th st., Phila., Pa.; Steelton, Pa. viii.
Pittsburgh Steel Casting Co., 26th st. and R. R. av., Pittsburgh, Pa.
Pittsburgh Steel Works (Anderson, Du Puy & Co.), 107 Wood st., Pittsburgh, Pa.
Pompton Steel & Iron Co., Pompton, N. J.
Pottstown Iron Co., Pottstown, Pa.
Riverside Iron Works, Wheeling, W. Va.
Roane Iron Co., Chattanooga, Tenn.
Sanderson Bros. Steel Co., Syracuse, N. Y.
Schulte, Nehring & Co., Evansville, Ind.
Scranton Steel Co., Scranton, Pa.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. 3.
Southern Steel Works (John Leighton & Sons), Chattanooga, Tenn.
South Tredegar Iron Co , St. Louis, Mo.; Chattanooga, Tenn.
Springfield Iron Co.'s Iron & Steel Works, Springfield, Ill.
Standard Steel Casting Co., Thurlow, Pa.
Sterling Steel Co. (Ltd.), 208 Wood st., Pittsb'g, Pa.
Syracuse Steel Foundry, Syracuse, N. Y.
Troy Steel & Iron Co., Troy, N. Y.
Union Steel Co., 1st Nat. Bank Bldg., Chicago, Ill.
Washburn Car Wheel Co., Hartford, Conn.
Wayne Iron & Steel Works (Brown & Co.), Pittsburgh, Pa.
West Bergen Steel Works (Spaulding, Jennings & Co.), Jersey City, N. J.
Western Steel Co., St. Louis, Mo.
Wheeling Steel Works, Wheeling, W. Va.
Windsor Locks Steel Co., Bridgeport, Conn.
Worcester Steel Works, Worcester, Mass.

Steering Apparatus.

Barnes Tool Co., 958 Grand st., New Haven, Conn.
Boston Machine Mfg. Co., Granite, c. 1st st., S. Boston, Mass.
Manton Windlass & Steam Steerer Co. (The), Providence, R. I.
Richardson, Nathan, Gloucester, Mass.

Stencils—Fresco, Etc.

Callow, J. J., 53 Beech st., Cleveland, O. 53.

Steel Plates & Burning Brands, Letters and Figures.

American Tool Co., 44 S. Water st., Cleveland, Ohio.
Bellows & Dickey, 833-889 Sheriff st., Cleveland, O.
Callow, J. J., 53 Beech st., Cleveland, O. 53.
Hoggson & Pettis Mfg. Co. (The), 64-68 Court st., New Haven, Conn.
Howard, Wm. H., 124 E. 3d st., Dayton, O.
Railroad Car Stencil Co., Home Ins. Bldg., Chicago, Ill.
Reese & Co., S. W., 29 Church st., N. Y.

Stocks & Dies.

Billings & Spencer Co., Hartford, Conn.
Butterfield & Co., Derby Lane, Vt.
Hart Mfg. Co., Cleveland, O.
King, J. M. & Co., Waterford, N. Y.
McCoy & Sanders, 26 Warren st , N. Y.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Wells Bros. & Co., Greenfield, Mass.
Wiley & Russell Mfg. Co., Greenfield, Mass.

Stone—Artificial.

Bauer, Frank, 510 Plum st., Cincinnati, O.
Cary, E. M., 256 Trumbull st., Detroit, Mich.
Cin. Carb. Artificial Stone, Tile & Marble Co. (The), 109 W. Canal st., Cincinnati, O.
Columbia Artificial Stone Paving Co., N. Juniper, c. Filbert st., Phila., Pa.
Curtis, P. H., Rochester, N. Y.
Duhrkoop, Chas. B., Portland, Ore.
Green, C. F. & Co., Worcester, Mass.
Krause, William & Son, 1621 N. 5th st., Phila., Pa.
Kuhl, Chas. (Artificial Stone Co.), 91-93 Canal st., V. Vine & Race sts., Cincinnati, O.
Langford, J. E., Ottumwa, Iowa.
Lansing Artificial Stone Co., Lansing, Mich.
Lewis, John A., Des Moines, Iowa.
Longmate, J., Farmer City, Ill.
Oregon Artificial Stone Co., Portland, Ore.
Pierce Mfg. Co. (The), Bridgeport, Conn.
Racine Cement & Pipe Co., Racine, Wis.
Schillinger, J. J., 420 E. 92d st., N. Y.
Spalding, A. R., Galveston, Texas.
Wickersham, E. H., Keokuk, Iowa.

Stone—Crushed.

Bell, J. L. W., 822 Market st., Emporia, Kas.
Dolese & Shepard, 162 E. Washington st. (Room 24), Chicago, Ill.
Kimbell & Cobb Stone Co., 162 Washington st., Chicago, Ill.
Tomkins, Calvin, 387 South st., N. Y.

Stone—Pumice & Rotten.

Behr, Herman & Co., 75 Beekman st., N. Y.
Hammill & Gillespie, 240-242 Front st., N. Y.
Van Amringe, Theo., 306 Pearl st., N. Y.
Waddell, R. J. & Co., 52 Beekman st., N. Y.

*Stone for Structural Purposes.

Rigelow Blue Stone Co., Stewart Bldg., N. Y.
Buena Vista Free-Stone Co. (The), Buena Vista, O.
Cleveland Stone Co., Cleveland, O.
Gates & Park, Niantic Conn.
N. Y. Stone Contracting Co., 113 E. 25th st., N. Y
Norcross Bros., Worcester, Mass.
White, N. G. & Co., 547 W. 14th st., N. Y.

*Stoves—Car.

Michigan Stove Co., Detroit, Mich.
Stamford Foundry Co., Stamford, Conn.

Stoves—Depot and R. R.

Detroit Stove Works, 34 Woodward st., Detroit, Mich.

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Magee Furnace Co., 32 Union st., Boston, M.
Peckham, J. S. & M., Utica, N. Y.
Phillips & Clark Stove Co., Geneva, N. Y. 74.
Phoenix Iron Foundry, 203 Wade st., Cincinnati, O.
Reading Stove Works, Reading, Pa.
Richardson & Boynton Co., 84 Lake st., Chicago, Ill.

Stoves and Ranges—Ship.

Magee Furnace Co., 32-38 Union st., Boston, Mass.
Taunton Iron Works Co., Taunton, Mass.

Straighteners & Benders—Rail.

Alexander, S. A., York, Pa.
Boynton & Plummer, 52 La Grange st., Worcester, Mass.
Dwight, E. P., 407 Library st., Phila., Pa.
Fulton Iron & Engine Works, Detroit, Mich.
Hazleton Iron Works, Hazleton, Pa.
Jersey City Iron Works, 587 Henderson st., Jersey City, N. J.
McCoy & Sanders, 26 Warren st., N. Y.
Wright, John J., Bremen, Ind.
Wells, Bros. & Co., Greenfield, Mass.

Straps—Baggage Check.

Hoole Mfg. Co., 46 Bond st., N. Y.

Street Car Signs—Metal and Reversible.

Brill, J. G. Co., Phila., Pa.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Marsland, F. E., 84 W. B'way, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Tuchfarber, F. Co. (The), Cincinnati, O.
Weber & Lind Sign Co., 109 Wabash av., Chicago, Ill.

*Street Car Sheds.

Evans, H. D., Sunnyside Works, Hornsey Rise, N. London, England.

Street Railway Sweepers and Track Scrapers.

Andrews, Frank H., 545 W. 33d st., N. Y.
Brill, J. G. Co., Phila., Pa.
Brooklyn Railway Supply Co. (The), 44 Walworth st., B'klyn, N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Day, Augustus, 22 Park pl., Detroit, Mich.
Foote, Orlo A., Cleveland, O.
Greeley, E. S. & Co. (The), 5 and 7 Dey st., N. Y.
Hains Bros., 55 B'way, N. Y.
Johnson, Tom L., Indianapolis, Ind.
Laclede Car Co., 4700 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co., 27-35 Walworth st., B'klyn, N. Y.
Littell, H. H., Louisville, Ky.
Martin, Rufus & Co., 114 Nassau st., N. Y. 52.
Phœnix Steel Wire Broom & Brush Co., 199 E. Randolph st., Chicago, Ill.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart B'ldg., N. Y.
Street Railway Supply Co., Cleveland, O.
Van Dom Iron Works, Cleveland, O.

Stretchers—Cable and Wire.

Claffy, John, 48 Dey st., N. Y. 91.
Racine Malleable & Wrought Iron Co. (The), Racine, Wis.

Submarine Tunnels.

Submarine Tunnel and Tube Co., 95 Liberty st., N. Y.

Sulphur.

Atlantic Sulphur Works, 119 Maiden Lane, N. Y.
Battelle & Renwick, 163 Front st., N. Y.
Gray, Daniel H., 113 Maiden Lane, N. Y.
Pope & Bro., Thos J., 292 Pearl st., N. Y.

Supplies—Contractors.

American Mfg. & Supply Co., 10 Dey st., N. Y.
American Mfg. Co., 63 S. Robert st., St. Paul, Minn.
Barrows & Co., 64 Broadway, N. Y.
Beatty, M., & Sons, Welland, Ont.
Buck & Co., M. M., 209 N. 35th st., St. Louis, Mo.
Carey, Geo., 1 Broadway, N. Y.
Claffy, John, 48 Dey st., N. Y. 91.
Clarkson, John W., 28 Reade st., N. Y.
Contractors' Plant Mfg. Co., 129 Erie st., Buffalo, N. Y.
Conway, M. W., 487 Monroe st., B'klyn, N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Delafield, Tallmadge, 95 Liberty st., N. Y.
Donegan & Swift, 174 Fulton st., N. Y.
Drummond, M. J., 120 Broadway, N. Y.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Heyn, Alfred, 47 Broadway, N. Y.
Hoefer, H. & Co., Dayton, O.
Humphreys & Sayce, 1 Broadway, N. Y.
Ingersoll Rock Drill Co., 10 Park Place, N. Y.
Jordan, F., 200 Broadway, N. Y.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Kilbourne & Jacobs Mfg. Co., Columbus, O. 2.
Laflin & Rand Powder Co., 29 Murray st., N. Y.
Leavitt, C. W. & Co., 161 Broadway, N. Y.
Logan, Gregg & Co., 306 Wood st., Pittsburgh, Pa.
McBain, Thos. A., 640 W. 38th st., N. Y.
Mead, I. V., 370 av. A, N. Y.
Melcher, Chas. W., 811 N. 2d st., St. Louis, Mo.
Middleton, W. S., 52 John st., N. Y.
Motley, Thornton N., 26 Liberty st., N. Y.
Obermayer, The. S., Foundry Supply Mfg. Co., Cincinnati, O.
Offutt & Co., Church and Rector sts., N. Y.
Pennsylvania Mfg., Mining & Supply Co., 1006 Penn av., Pittsburgh, Pa.
Pollock, Alex., 212 West st., N. Y. 32.
Rand Drill Co., 23 Park Place, N. Y. 1.
Sampson, Geo. H., 231 State st., Boston, Mass.
Saxton, J. C., 52 Broadway, N. Y.
Tomkins, Calvin, 387 South st., N. Y.
Vulcan Iron Works Co., Oswego, N. Y.
Williamson & Cassidy, 24 S. 4th st., Phila., Pa.

Supplies—(Dining Room) R. R. & S. S.

Gordon & Dilworth, 563 Greenwich st., N. Y.

Supplies—Electrical.

Acme Electrical & Illuminating Co., 106 Liberty st., N. Y.
Adams, Geo. H. & Co., 176 Broad st., Providence, R. I.
Adee, D., 45 Liberty st., N. Y.
Adrian Electric Co., 47 5th av., Pittsburgh, Pa.
Ahlstrom, Oscar G., 162 William st., N. Y.
Akron Electrical Co., Akron, O.
Aloe, A. S. & Co., 300 N. 4th st., St. Louis, Mo.
American Electric Brush Co., 51 W. 4th st., Cincinnati, O.
Am. Electrical Mfg. Co., 3 E. 14th st., N. Y.
Am. Electric Mfg. Co., 90 Lake st., Chicago, Ill.
Am. Electrical Works, Providence, R. I.; 18 Cortlandt st., N. Y.
Am. Galvanic Co., 1103 Chestnut st., Phila., Pa.
Am. Magnetic Electric Co., 88 Purchase st., Boston, Mass.
Am. Union Electric Co., 188 W. 5th st., Cincinnati, O.
Ametl, H., 89 Court st., Boston, Mass.
Anderson, Homer, Peekskill, N. Y.
Ansonia Brass & Copper Co., 19 Cliff st., N. Y.; 61 Washington st., Chicago, Ill.
Applegate, S. S., Camden, N. J.
Applegate Electric Floor Mat Mfg. Co., 35-37 Market st., Camden, N. J.

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Appley & Ward, 2, 4 and 6 College pl., N.Y.
Arnoux & Hochhausen Electric Co., 478 Pearl st., N.Y.
Atkinson, P., 166 Randolph st., Chicago, Ill.
Axthelm, Ernst, 103 3d av., Pittsburgh, Pa.
Baetz, W., 163 Broome st., N.Y.
Bahr, John F. & Co., 38 Dey st., N.Y.
Ball Electric Mfg. Co. (The) (Ltd.), Reading, Pa.
Bausch & Dransfield, 20 Arcade, Rochester, N.Y.
Baxter, C., 40 Fulton st., N.Y.
Baxter Electric Mfg. & Motor Co. (The), 11 South st., Baltimore, Md.
Baxter, H. E. & C., 18 Fulton st., B'klyn, N.Y.
Bender, O. N. & Co., 34 Friendship st., Providence, R.I.
Benson & Thompson, 3015 Chestnut st., Phila., Pa.
Bergmann, C. F., 244 Main st., Buffalo, N.Y.
Bergmann & Co., 292 av. B, N.Y.
Bible, D. P., 756 B'way, N.Y.
Birmingham Pat. Metallurgical Co., 40 B'way, N.Y.
Bishop Gutta Percha Co., 422 E. 25th st., N.Y.
Black, L. & Co., 142 Woodward st., Detroit, Mich.
Blodgett Bros. & Co., 63 Kilby st., Boston, M.
Blum, B. & Co., 7 Dey st., N.Y.
Bly, Charles L., 37 Pearl st., Boston, Mass.
Bossard, A., 7 Frankfort st., N.Y.
Boston Electric Co., 548 Washington st., Boston, Mass.
Boston Electric Co., 176 Westminster st., Providence, R.I.
Boulton Carbon Co., Cleveland, O.
Bowen, W. J., Norwalk, O.
Brooks, D. S., Albion, n. Sansom st., Phila., Pa.
Brown & Brown, 106 Liberty st., N.Y.
Brown Electric Co., 400 Wood st., Pittsb'g, Pa.
Brush Electric Co. (The), Belden, n. Mason st., Cleveland, O.
Buffalo Electrical Works, 1590-1620 Niagara st., Buffalo, N.Y.
Bunnell, J. H. & Co., 106 Liberty st., N.Y.
Burger, F. H., 9th av., c. W. 93d st., N.Y.
Burkhardt, Wm. F. E., 1164 B'way, N.Y.
Burnap, Wm. H., 259 W. 27th st., N.Y.
Butler Hard Rubber Co. (The), 33 Mercer st., N.Y.
Butler, J. C. & Co., 49 Water st., Sandusky, O.
Cable, D. J., 77 4th av., Pittsburgh, Pa.
California Electric Light Co., 224 Jessie st., San Francisco, Cal.
California Electrical Works, 35 Market st., San Francisco, Cal.
Callender's Insulating & Waterproofing Co., 154 La Salle st., Chicago, Ill.
Campbell Electric Supply Co., 95 Milk st., Boston, Mass.
Central Electric Co., 40 La Salle st., Chicago, Ill.
Champlin, F. H., Laconia, N. H.
Chandler & Farquhar, 179 Washington st., Boston, Mass.
Chicago Electric Co., 86 Market st., Chicago, Ill.
Chicago & Great Western Electric Mfg. Co., 204 Dearborn st., Chicago, Ill.
Chittock, J., 136 Ontario st., Cleveland, O.
Clark Insulated Electric Wire Co., 124 Chestnut st., Phila., Pa.
Clark, W. C., Portland, Me.
Clark Insulated Electric Wire Co., 419 Walnut st., Phila., Pa.
Cleveland Electric Matting Co., Nat. Bk. Bldg., Cleveland, O.
Cleveland Electrical Mfg. Co. (The), 832 Sheriff st., Cleveland, O.
Cleveland, W. B., 144 Superior st., Cleveland, Ohio.
Cleverly Electrical Works, 318 Chestnut st., Phila., Pa.
Colburn, J. W. & Co., Fitchburg, Mass.
Cole, W. R. & Co., 63 Fort E., Detroit, Mich.
Columbus Electric Supply Store, Columbus, Ohio.
Congdon, A. F., 405 N. 7th st., Phila., Pa.
Conn. Electric Co., Waterbury, Conn.
Cornish, T. E., Electric Bell Co. (The), 1111 Chestnut st., Phila., Pa.
Corwin, W. S., 777 Broad st., Newark, N.J.
Crandall, W. C., 59 S. 4th st., Phila., Pa.
Cutler, H. W., 5 E. Court st., Springfield, Mass.
Darche, G. C., 37 Clarke st., Chicago, Ill.
Dawning & Co., 290 Walnut st., Phila., Pa.
Day, Austin G., 120 B'way, N.Y.
Derby, L. & Co., 10 Prescott st., Lowell, Mass.
Detroit Electrical Works, 7th & Woodbridge st., Detroit, Mich.
Dickinson, T. & E., 254 Main st., Buffalo, N.Y.
Dist. Telegraph & Electric Co., Waterbury, Conn.
Doods, J., Dayton, O.
Domestic Electrical Mfg. Co., 19 Pearl st., Boston, Mass.
Draper Bros., Electrical Works, c. Lafayette & Brush sts., Detroit, Mich.
Dubois, C. H. & Son, 61 Ann st., N.Y.
Earle, H. C., 195 Front st., Worcester, Mass.
Eastern Electric Cable Co., 61 Hampshire st., Boston, Mass.
Eaton, A. K., 191 Fulton st., N.Y.
Ebel, Chas., 3 Cannon st., N.Y.
Edison Electrical Lamp, S. 5th st.; E. Newark, N.J.
The Eddy Electric Mfg. Co., 68 Market st., Hartford, Conn.
Edison Machine Works, Schenectady, N.Y. 104 Goerck st., N.Y.
Edison, T. A., Menlo Park, N.J.
Elbach & Killian, Chicago, Ill.
Electric Aurophone Co., St. Louis, Mo.
Electrical Accumulator Co., 44 B'way., N.Y.
Electric Construction & Supply Co., 87 Liberty st., N.Y.
Electrical Construction & Maintenance Co., 310 Chestnut st., Phila., Pa.
Electrical Development & Mfg. Co., 197 Congress st., Boston, Mass.
Electric Disk & Belt Co., 3 Boylston st., Boston, Mass.
Electro Dynamic Co., of Phila. (The), 212-226 Carter st., Philadelphia, Pa.
Electric Gas Lighting Co. (The), 25 Arch st., Boston, Mass.
Electric Mfg. Co., 24 5th st., Troy, N.Y.
Electrical Supply Co., 17 Dey st., N.Y.; 171 Randolph st., Chicago, Ill.
Electrical Supply Co. (The), Ansonia, Conn.
Electrical Supply Co., 328 Bush st., San Francisco, Cal.
Electric Supply & Mfg. Co., 117 Public sq., Cleveland, O.
Electric Supply Co., 3 S. Warren st., Syracuse, N.Y.
Electric Tube Co., 65 Washington st., N.Y
Electric & Machine Co. (The), 71 Sudbury st., Boston, Mass. 77.
Electro Dynamic Co., 224 Carter st., Philadelphia, Pa.
Elektron Mfg. Co., 143 Nassau st., N.Y.
Elgin Telephone Co., Elgin, Ill.
Empire City Electric Co., 15 Dey st., N.Y.
Empire Electric Carbon Co., 2 9th st., Pittsburgh, Pa.
Empire Electric Mfg. Co., 27 Walworth st., Brooklyn, N.Y.
Enterprise Electric Co., Friendship, N.Y.
Entrecken, S. W., Harrisburgh, Pa.
Equitable Electric Co., 52 B'way., N.Y.
Eureka Electric Co., 23 S. 4th st., Phila., Pa.
Facer, W. E. & Co., 145 Bank st., Cleveland, O.
Faraday Carbon Co., 33d, c. Smallman st., Pittsburgh, P.
Fawcett, W., 172 Mercer st., N.Y.
Ferris & Fallon, 1695 Broadway, N.Y.
Fix, Wm., 170 Fulton st., N.Y.
Fleischmann, A. F., 1226 Chestnut st., Phila., Pa.
Fleming, I., 1113 Chestnut st., Phila., Pa.
Foote, A. R. S., 528 20th st., Washington, D.C.
Forest City Carbon Mfg. Co., Cleveland, O.
Forest City Electric Works, 26 S. Water, Cleveland, O.

The numbers following names indicate page on which the firm advertises.

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Forsaith, S. C., Machine Co., Manchester, N.H.
Franklin Electric Works, 206 E. Baltimore st., Baltimore, Md.
Freeman, Warren P. Co. (The), 106-108 Liberty st., N. Y.
Froeckman, E. A., 904 N. 4th st., St. Louis, Mo.
Fuller, Holtzer & Co., 27 Arch st., Boston, Mass.
Galvano Faradic Mfg. Co., 300 4th av., N. Y.
Gardell, J. O. & Co., 64 Lodge st., Cincinnati, Ohio.
Gill, W. E., 229 Lake st., Chicago, Ill.
Gilmartin, E., 31 Williams st., Fort Wayne, Ind.
Globe Carbon Co. (The), C. & P. R. R., n. Euclid av., Cleveland, O.
Globe Electric Co., 46 S. Water st., Cleveland, Ohio.
Goodrich, B. F. Co., Akron, O.
Gray's Dynamo Electric Machine Co., 15 Chardon st., Boston, Mass.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Gronbech, C. E. A. & Co., 161 W. 29th st., N. Y.
Grovesteen, M. W. & Co., 602 W. 22d st., N. Y.
Gulin, F. A., 59 S. 4th st., Phila., Pa.
Hall Mfg. Co., 51 S. Register st., Baltimore, Md.
Hall, B. S. & Son, 31 Otis st., Boston, Mass.
Hall, Thomas, 19 Bromfield st., Boston, Mass.
Hampton, C. W., 607 Mission st, San Francisco, Cal.
Hanson, Van Winkle & Co., 219-221 Market st., Newark, N. J.; 92-94 Liberty st., N. Y.
Harbert, E. E. & Co., 159 La Salle st., Chicago, Ill.
Harris, A. C., 536 3d st., Louisville, Ky.
Hatteroth & Russ, 321 Kearney st., San Francisco, Cal.
Hazazer, F. W., 32 Frankfort st., N. Y.
Hazazer & Stanley, 32 Frankfort st., N. Y.
Heisler Electric Light Co., 809 S. 7th st., St. Louis, Mo
Helmer, C. W., Columbus, O.
Hempler, H. H., 453 Pennsylvania av., Washington, D. C.
Hernstein-Prince, S & O. Co., 317 N. 4th st., St. Louis, Mo.
Herrick, A. B. & Co., 26 Church st., N. Y.
Herzog Electric Appliance Co., 34 Broad st., N. Y.
Herzog Teleseme Co., 34 Broad st., N. Y.
Hill, W. S., 133 Oliver st., Boston, Mass.
Hinds, C. H., 418 W. 27th st., N. Y.
Hoenack, Paul, 191 Worth st., N. Y.
Holmes, Booth & Haydens, Waterbury, Conn.
Holmes Burglar Alarm Telegraph Co, 518 Broadway, N. Y.
Holmes, E. T. & Co., 220 Devonshire st., Boston, Mass.
Homann Model Works (The), 58 W. 4th st., Cincinnati, O.
Hotchkiss, Clark B., 16 Dey st., N. Y.
Hudson & Zeltner, E. 170th st., n. Third av., N. Y.
Hughes, J. M. & Co., 242 W. 4th st., Cincinnati, O.
Improved Patented Porous Cup Battery Co. (Ltd.), r. 89½ Green st., N. Y.
Independent Electric Co., 1369 Chestnut st., Phila., Pa.
Jackson & Morgan, 16 Exchange pl., N. Y.
Jenney Electrical Co., Indianapolis, Ind.
Jerome Kidder Mfg. Co., 820 Broadway, N. Y.
Johnson, Willis, 21 Meadow st., Waterbury, Conn.
Jones, C. E. & Bro, 55 Longworth st., Cincinnati, O. 78.
Jost, Edmund, 320 Market st., Newark, N. J.
Julien Electric Co., 120 Broadway, N. Y.
Kayser, H., 4 Liberty pl, N. Y.
Kellogg & Co., Lynn, Mass.
Kelly, James F., 19 Dey st., N. Y.
Kelly, W. E., 26 S. Water st., Cleveland, O.
Kennedy Mfg. Co., Providence, R. I.
Ketcham, J. M. & Co., 76 W. 125th st., N. Y.
Keyser, F., 51 N. 7th st., Philadelphia, Pa.
Kimball & Davis, 160 Portland st., Boston, Mass.
Kinsman, F. E., 145 Broadway, N. Y.
Klawiter, C. A., 17 Helsendegen Block, Detroit, Mich.
Kookogey Electric Mfg. Co., 18 Dey st., N. Y.
Knudson & Ellsworth, 39 Nassau st., N. Y.
Kyle, S, & Co., 45 Cortlandt st., N. Y.
Law Telephone Co., 112 Liberty st, N. Y.
Leach & Greene, 125 Tremont st., Boston, Mass.
Leclanche Battery Co., 149 W. 18th st., N. Y.
Lee, Chas. E., Rochester, N. Y
Lees, T., 144 Ontario st., Cleveland, O.
Lehman, A. A., 12 N. Holliday st., Baltimore, Md.
Leitch, A. E., 4-6 W. 2d st., Dayton, O.
Leslie, H. C., Portland, Me.
Lookogey, Wm. P., 40 Dey st., N. Y.
Loomis Electric Mfg. Co., 39 Equitable Bldg., Boston, Mass.
Lyman, A. B., 36 S. Water st., Cleveland, O.
Lytle & Co., 15 Cortlandt st., N. Y.
Mackey, J. C. Co., 51 Wieting Blk., Syracuse, N. Y.
Malbon & Christian, Baltimore, Md.
Marshall, Wm., c. Waverly & University pl., N. Y.
Maryland Electric Motor Co., 20 E. Lexington st., Baltimore, Md.
Mather Electric Co. (The), Hartford, Conn.
Mayo, Geo. A., 106 Portland st., Boston, Mass.
McCormick, D. A., 238 Woodward st., Detroit, Mich.
McCreery & Prendergast, 986 6th av., N. Y.
McGinnis, W. F., 587 Hudson st., N. Y.
McIntosh Galvanic & Farradic Battery Co., 300-302 Dearborn st., Chicago, Ill.
McIntire & Co., 27 Marshall st., Newark, N. J.
Merchants Mfg. & Construction Co., 54 Broad st., N. Y.
Meserole & Co., 26 Church st., N. Y.
Metropolitan Electric Service Co., 120 B'way, N. Y.
Meyer, C. W., 357 4th av., N. Y.
Midland Electric Co., 1213 Harney st., Omaha, Neb.
Miles, C. C., St. Paul, Minn.
Miner, B. D., Indianapolis, Ind.
Minneapolis Electric Construction Co., 27 4th st., S., Minneapolis, Minn.
Monarch Electric Co., Astoria, N. Y.
Moore Bros., 108 Liberty st., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Moran & Co., 46 New st., N. Y.
Morehouse, J. T., 58 Bruen st., Newark, N. J.
Murray, W. B., Minneapolis, Minn.
Mutual Electric Mfg. Co., 292 Graham st., B'klyn, N. Y.; 20 Nassau st., N. Y.
National Carbon Co. (The), Wilson av. & L. S. & M. S. R. R., Cleveland, O.
National Electric Co., 149 N. Y. av., Washington, D. C.
National Electric Service Co., 195 Wabash av, Chicago, Ill.
National Electric Service Co., 120 B'way, N. Y.
National Galvanic Battery Co., 18 Cortlandt st., N. Y.
Nellis, F. N., 199 Canalport av., Chicago, Ill.
Ness Electrical Co., Des Moines, Iowa.
New England Glass Works, 29 Murray st., N. Y.
New Haven Clock Co., 16 Park pl., N. Y.
N. Y. Carbon Works, 39 Dey st., N. Y.
New England Pottery Co., 149 Condor st., East Boston, Mass.
N. Y. Electric Construction Co., 242-244 E. 122d st., N. Y.
Newman, A. S., 1180 B'way, N. Y.
Noll, Augustus, & Co., 15 E. 16th st., N. Y.
Noll Bros., 65 5th av., N. Y.
North Western Electric Works, St. Paul, Minn.
Novelty Electric Co., 236 S. 5th st., Phila., Pa.
Okonite Co., 13 Park Row, N. Y. 11.
Oneco Mfg. Co. (The), 43-49 Water st., Bridgeport, Conn.
Orr, James, 44 Federal st., Allegheny, Pa.
Orr & Howe, 409 Smithfield st., Pittsburgh, Pa.
Ostrander, W. R. & Co., 21 23 Ann st., N. Y.
Owen Electric Belt & Appliance Co. (The), 69 E. Randolph st., Chicago, Ill.

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Parker Russell Mining & Mfg. Co., St. Louis, Mo.
Parrish Bros. & Pick Electrical Co., 35 3d st., Detroit, Mich.
Partrick & Carter, 114 S. 2d st., Phila., Pa. 69.
Partz Electric Battery Co., 1723 Chestnut st., Phila., Pa.
Paul, L. T., 224 Carter st., Phila., Pa.
Peabody, H. G., 54 Boylston st., Boston, Mass.
Pearce & Jones, 79 John st., N. Y.
Peck Bros., 35 Point st., Providence, R. I.
Pettingill, F. E. & Co., 167 Congress st., Boston, Mass.
Philadelphia Wire Mfg. Co., 124 Chestnut st., Phila., Pa.
Phœnix Glass Works, 46 6th av., Pittsburgh, Pa.; 729 B'way, N. Y.
Physicians' Supply Co., 38 Wiggins Blk., Cincinnati, O.
Pinkham Electric Gas Lighting Co., 1018 Chestnut st., Phila., Pa.
Pinkham & Cleverly, 1018 Chestnut st., Phila., Pa.
Pittsburgh Carbon Co., Spruce al., n. 33d st., Pittsburgh, Pa.
Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.
Plumb, Charles & Co., 100 Niagara st., Buffalo, N. Y.
Pope, W. R. & Co., Baltimore, Md.
Popular Electric Bell & Alarm Co., 8 Elm st., N. Y.
Post & Co., Pearl and Elm sts., Cincinnati, O.
Prentiss, V., Electrical Mfg. Co., 45 Dey st., N. Y.
Prentis, Vincent, 172 Centre st., N. Y.
Providence Electric Supply Co., 56 Washington st., Providence, R. I.
Pruden, S., 22 Bank st., Newark, N. J.
Pulvermacher Galvanic Co., 1164 B'way, N. Y.; 200 W. 4th st., Cincinnati, O.
Queen, Jas. W. & Co., 924 Chestnut st., Phila., Pa.
Railway Telegraph Supply Co., 211 Randolph st., Chicago, Ill.
Ramsey, J., 108 Clay st., Baltimore, Md.
Randa, Otto, 131 William st., N. Y.
Raynor, Hiram M., 25 Bond st., N. Y.
Reading Electrical Supply Co., Reading, Pa.
Redding Electrical Co., 30 Hanover st., Boston, Mass.
Reed & Page, 28 Pearl st., Worcester, Mass.
Rees, J. P., 720 Sansom st, Phila., Pa.
Reitz, Chas., 141 Virginia av., Indianapolis, Ind.
R. I. Telephone & Electric Co., 54 Westminster st., Providence, R. I.
Richter Electric Light Co. (The), 117-121 N. Front st., Camden, N. J.
Roberts - Brevoort Electric Co. (Ltd.), 206 B'way, N. Y.
Roberts, Geo., 1st and Liberty sts., Pittsburgh, Pa.
Rousseau, David, 310 Mott st., N. Y.
Rowley, M. N., 52 Woodward av., Detroit, Mich.
Royce & Marcan, 1408 Pennsylvania av., Washington, D. C.
Russell, A. L., 109 Court st., Boston, Mass.
Sanden Electric Co., 822 B'way, N. Y.
Sawyer-Man Electric Co., 32 Nassau st., N. Y.; Phila. and Boston.
Schaefer Electric Mfg. Co., Cambridgeport, Mass.
Scheeffer, G. A., Evansville, Ind.
Schlumberger & Co., River st., c. Madison av., Allegheny, Pa.
Schmidt & Kaelber, 51 E. Main st., Rochester, N. Y.
Schopper, F. D., Race, c. Longworth st., Cincinnati, O.
Schuyler Electric Mfg. Co., Hartford, Conn.
Security Electric Signal Co., 23 Dey st., N. Y.
Serson Kauffer Electric Battery Co., 51 State st., Boston, Mass.
Shaw & Gleary, 55 N. 7th st., Phila., Pa.
Shawmut Electric Mfg. Co., 10 Mt. Washington st., Boston, Mass.
Shaw & Geary, 53 N. 7th st., Phila., Pa.
Sheehy, Robert J., 24 West st., N. Y.
Shelton Brass Hardware Co. (The), Huntington, Conn.
Sherman, C. R. & Son., New Bedford, Mass.
Shirmer & Sliter, Ghent st., Buffalo, N. Y.
Simplex Electrical Co., 36 Equitable Bld., Boston, Mass.
Smith, A. T., 6 W. 14th st., N. Y.
Smith Electric Co., Attleboro, Mass.
Smith & Shaw, 435 7th av. N. Y.,
Solar Carbon & Mfg. Co., 55 S. 3d st., Philadelphia, Pa.,
Sommer, A., 8 Pearl st., Newark, N. J.
Southern Electric Co., North, c. Lexington st., Baltimore, Md.
Sowdon, Elder & Wright, 131 Devonshire st., Boston, Mass.
Sprague Electric Railway & Motor Co., 185 Dearborn st., Chicago, Ill.
Stammers, Henry E., 1430 B'way, N. Y.
Standard Carbon Co. (The) (Hamilton & C. P. R. R.), Cleveland, O.
Standard China Works, Trenton, N. J.
Standard Electric Co., 502 4th av., Louisville, Ky.; 36 Equitable Bld., Boston, Mass.
Standard Electric Mfg. Co., 84 Broad st. N. Y.
Standard Electrical Works, Pearl c. Elm st., Cincinnati, O.
Standard Underground Cable Co., 91 5th av., Pittsburgh, Pa.; 128 Pearl st., N. Y.
Star Iron Tower Co., Fort Wayne, Ind.
Stout, Meadowcroft Co. (The), 12 Ann st., N. Y.
Sturtevant, J. A., 1111 Chestnut st., Phil., Pa.
Sullivan, Mortimer, 258 W. 125th st., N. Y.
Swift, H. E. & Co., Attleboro, Mass.
Syracuse Electrical & Mfg. Co., 30 S. Salina st., Syracuse, N. Y.
Tafel Bros., 417 3d st., Louisville, Ky.
Teleseme Electric Mfg. Co., 84 Broad st., N. Y.
Telemeter Co., of N. Y., 293 B'way, N. Y.
Thau, Henry, 130 Fulton st., N. Y.
Thomson-Houston Electric Co., 178 Devonshire st., Boston, Mass.
Tiers & Co., Otsego, c. Dickinson st., Philadelphia, Pa.
Tobin, J. L., 9 to 15 Alling st., Newark, N. J.
Toledo Electric Co., Toledo, O.
Tremont Electric Lighting Co., 10 Mt. Washington av., Boston, Mass.
Tropp, B., 285 Atlantic av., B'klyn, N. Y.
Tucker Electrical Mfg. Co., 35 B'way, N. Y.
U. S. Electrical Co., 18 Wall st., N. Y.
Union Electric Co., 65 5th av., Pittsburgh, Pa.
Union Porcelain Works, Green Point, N. Y.
Universal Rubber Co. (The), 45 Rose st., N. Y.
Valier & Bro., 1210 Market st., Phila., Pa.
Vandepoele Electric Mfg. Co., 45 B'way, N. Y.
Van Sands, Horace, 733 B'way, N. Y.
Vetter, J. C. & Co., 214 E. 47th st., N. Y.
Viaduct Electrical Works, c. Charles & German sts., Baltimore, Md.
Viaduct Mfg. Co., 14 S. Charles st., Baltimore, Md.
Vibratory Electric Motor Co., 16 Broad st., N. Y.
Voltaic Armor Co., 12 P. O. sq., Boston, Mass.
Voltaic Belt Co. (The), Marshall, Mich.
Waite & Bartlett, 143 & 204 E. 23d st., N. Y.
Walker & Kepler, 108 S. 4th st., Phila., Pa.
Waterbury Electric Co., Waterbury, Conn.
Waterhouse Electric & Mfg. Co., Hartford, Conn.
Watt, Jas. S., 81 Fulton st., N. Y.
Weigle, D. E., Des Moines, Ia.
Western Electric Co., 227 S. Clinton st., Chicago, Ill.
Western Electric Co., 70 Trinity pl., N. Y.
Westinghouse Electric Co., Garrison al. & Duquesne way, Pittsburgh, Pa.; 17 Cortlandt st., N. Y. vi. & vii.
Wheeler, E., 144 La Salle st., Chicago, Ill.
Wheeler Reflector Co., 18 Washington st., Boston, Mass.
Whitcomb, B. F., Claremont, N. H.
White House Mills, 17 Federal st., Troy, N. Y.
White House Mills, Hoosac, N. Y.
Whiting, F. M. & Co., Des Moines, Ia.

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Wildt, E. A. & Co., 83 Murray st., N. Y.
Will & Finck, 769 Market st., San Francisco, Cal.
Willard, W. H. & Co., 529 Main st., Worcester, Mass.
Williams, Chas., Jr., 115 Court st., Boston, Mass.
Wilson Electric Co., 43 Milk st., Boston, Mass.
Wilson, C. A., 333 Washington st., Boston, Mass.
Wilson & Hard, 174 Centre st., N. Y.
Wirsching, Aloys, 28 Centre st., N. Y.
Wood, Saxton & Co., 135 Spring st., N. Y.
Wollensak, G. F., Chicago, Ill.
Zeuschner, E., 189 Vine st., Cincinnati, O.
Zimdars & Hunt, 237 Mercer st., N. Y.
Zimmermann, G., 171 Halsey st., Newark, N.J.

Supplies—Fire Dept.

Ahrens Mfg. Co., 22-26 Webster st., Cincinnati, Ohio.
Allen, W. D. & Co., 151 E. Lake st., Chicago, Ill.
American Fire Hose Mfg. Co., 152 E. Lake st., Chicago, Ill.
Bishop, James L., r. 59 Ann st., N. Y.
Boston Woven Hose Co., 220 E. Lake st., Chicago, Ill.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Callahan, C. & Co., 164 High st., Boston, Mass.
Dunn, Knoebel & Co., 303 Third av., N. Y.
Fabric Fire Hose Co., 139 E. Lake st., Chicago, Ill.; 5 Barclay st., N. Y.
Gleason & Bailey Mfg. Co. (Ltd.), Seneca Falls, N. Y.
Gutta Percha & Rubber Mfg. Co., 159-161 E. Lake st., Chicago, Ill.
Leonard & McCoy, 118 Liberty st., N. Y.
Miller, Fred. J., 72 Maiden Lane, N. Y.
Morse, Andrew J. & Son, 138-140 Congress st., Boston, Mass.
Peto, Thos. H., 217 W. 10th st., Phila., Pa.
Preston, E. B. & Co., 413-417 5th av., Chicago, Ill.
Roberts, Geo. W. & Co., 144 E. Lake st., Chicago, Ill.
Silsby Mfg. Co. (The), Seneca Falls, N. Y.
Taft, E. A., 220-222 Lake st., Chicago, Ill.
U. S. Supply Co. (Ltd.), 51 John st., N. Y.
Whelpley, R. T., 141 Lake st., Chicago, Ill.
Woodhouse, D. A., Mfg. Co., 12 Barclay st., N. Y.

Supplies—Foundry.

Colson, Chas. D., 20 W. Lake st., Chicago. Ill.
Emerick, J. A. & Co., 1056-1076 Beach st., Phila., Pa.
Kelly, T. P. & Co., 38-40 S. Canal st., Chicago, Ill.
Melville, W. L., 16th st., n. cor. Laflin st., Chicago, Ill.
Moss, Chas. J., 97 Dearborn st. (Room 6), Chicago, Ill.
Obermayer, S., Foundry Supply Mfg. Co. (The), Cincinnati, O.
Packard, O. L., Milwaukee, Wis.
Paxson, J. W. & Co., 1021 N. Delaware av., Phila., Pa.
Ransom, E. D. & Co., Mulberry, c. Church st., Albany, N. Y.

Supplies—Mill.

Allis, Edward P. & Co., Milwaukee, Wis.
Barrows & Co., 66 Broadway, N. Y.
Greene, Tweed & Co., 83 Chambers st., N. Y.
Packard, O. L., Milwaukee, Wis.
Reeves, Thos. H., Minneapolis, Minn.
Taylor, John & Co., 1st and Mission sts., San Francisco, Cal.
Williamson & Cassedy, 24 S. 4th st., Phila., Pa.
Woodman, R., 169 High st., Boston, Mass.

Supplies—Machinists' and Engineers'.

Curtis Regulator Co., 69 Beverly st., Boston, Mass. **30.**
Frasse & Co., 62 Chatham st., N. Y.
George, E. & Co., 82 South st., N. Y.
Hill, Clark & Co., 156 Oliver st., Boston, Mass.
Jersey City Smelting Works, 107 Plymouth st., Jersey City, N. J.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Nightingale, S. C., & Childs, 134 Pearl st., Boston, Mass.
Packard, O. L., Milwaukee, Wis.
Rogers, H. A. & Co., 19 John st., N. Y. **1v.**
Walbaum, W. H., Phila., Pa.

Supplies—Miners'.

Bissell, David S., 5-6 Bissell Blk., Pittsburgh, Pa.
Bucyrus Foundry & Mfg. Co., Bucyrus, O.
Cleaves, S. E. & Sons, Houghton, Mich.
Herbertsons, J. & Sons, Brownsville, Pa.
Howard, Childs & Co., 605 Smithfield st., Pittsburgh, Pa.
Jeffrey Mfg. Co. (The), Columbus, O.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Marinette Iron Works Co., Marinette, Wis.
Miners' Supply Co., St. Clair, Pa.
Rand Drill Co., 23 Park pl., N. Y. **1.**
Rogers, H. A., 19 John st., N. Y. **1v.**
Rumsey, L. M., Mfg. Co., St. Louis, Mo.
Taylor, John & Co., 65 1st st., San Francisco, Cal. **63.**

Supplies—Natural Gas.

Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Best, Fox & Co., 1st av., c. Ferry st., Pittsburgh, Pa.
Duquesne Brass Works & Foundry, 93 Water st., Pittsburgh, Pa.
Oil Well Supply Co. (Ltd.), 91-92 Water st., Pittsburgh, Pa.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
The Wm. Powell Co., 50-54 Plum st., Cincinnati, O.
Union Foundry & Machine Co. (Ltd.), 112 Water st., Pittsburgh, Pa
Woodworth, Evans & Co. (Ltd.), 122 3d av., Pittsburgh, Pa.

Supplies—Oil Well.

Cass Mfg. Co. (The), Lima, O.
Hardwicke & Ware, Buffalo, N. Y.
Pierce Artesian & Oil Well Supply Co., 80 Beaver st., N. Y.

Supplies—Railroad Lamp.

Lovell, F. H. & Co., 118 John st., N. Y.
Rochester Lamp Co., 25 Warren st., N. Y.

Supplies—Railroad.

Acme Machinery Co., Cleveland, O.
Acme Railroad Appliance Co., 19 Pearl st., Boston, Mass.
Adams & Westlake Mfg. Co. (The), 110 Ontario st., Chicago, Ill.; 115 B'way, N. Y.
Ajax Forge Co., 183 Dearborn st. (Room 6), Chicago, Ill.
Albany Steam Trap Co., Albany, N. Y.
Allen Paper Car Wheel Co., 604 Pullman Bldg., Chicago, Ill.
Allen Paper Car Wheel Co., 31-33 B'way N. Y.
Aller, A., 109 Liberty st., N. Y.
Allis, Edward & Co., Milwaukee, Wis.
Allison Mfg. Co., 32d & Walnut sts., Phila., Pa.
American Anti-Friction Co., 115 B'way, N. Y.
Am. Brake Co., 160 B'way, N. Y.; 1933 N. 2d st., St. Louis, Mo
Am. Bronze Works, 46-48 Columbus st., Cleveland, O.

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Am. Equipment Co., 2 Wall st., N. Y.
Am. Mfg. & Supply Co., 10-12 Dey st., N.Y.
Am. R'way Equipment Co. (Ltd.), 45 B'way, N.Y.
Am. Railing Supply Co., Grand Rapids, Mich.
Am. Steam Packing Co., 51 Kilby st., Boston, Mass.
Ames Automatic Car Coupling Co., 29 Oliver st., Boston, Mass.
Ames Car Coupling Co., 1430 S. Penn sq., Phila., Pa.
Andrews, Frank H., 545 W. 33d st., N.Y.
Armour & Osterhoudt, 100 Beekman st., N.Y.
Atkinson & Co., 59 S. Clark st. (Room 5), Chicago, Ill.
Atwood Hemp Car Wheel Co., 59 Liberty st., N.Y.
Automatic Traction Draw-Bar Co., 496 B'way, N.Y.
Bacorn, Samuel V., 26 W. Lake st. (Room 3), Chicago, Ill.
Bagott, Richard H., 116 John st., N.Y.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Baker Adjustable Bearing Co., 35 Wall st., N.Y.
Baker Heater Co., 549 W. 33d st., N. Y.
Barbaroux & Co., 139 3d st., Louisville, Ky.
Barnes, F. P., 129 Milk st., Boston, Mass.
Barnes & Snow, Bangor, Me.
Barr, E. & Co. (Ltd.) 78 John st., N. Y.
Barrows & Co., 64 B'way, N. Y.
Bass, John H., 97 Dearborn st., Chicago, Ill.
Beach, J. C. & Bro., 31 B'way, N. Y.
Beadle, Edw., 1193 B'way, N. Y. **73.**
Beadle & Courtney, 426 Walnut st., Phila., Pa.; 1193 B'way, N. Y.
Beals, G. & Son, 40 White Bldg., Buffalo, N. Y.
Beal's Brake Co., 16 Exch. pl., N. Y.
Beggs, James & Co., 9 Dey st., N. Y.
Belknap, W. B. & Co., 115 W. Main st., Louisville, Ky.
Bell, Thomas J. & Co., B'way, c. 2d st., Cincinnati, O.
Bemis Car Box Co., 18 Platt st., N. Y. · 30 Taylor st., Springfield, Mass ; 218 La Salle st. (Room 426), Chicago, Ill.
Benton & King Co., 86 John st., N. Y.
Berkery, J. S., 21 Duhl Blk., Detroit. Mich.
Bickerton, T. B. & Co., 12 S. 4th st., Phila., Pa.
Billin, A. Cramer. 115 Dearborn st., Chicago, Ill.
Bing, James, 3737 Filbert st., Phila., Pa.
Bingham, W. & Co., 146 Water st., Cleveland, Ohio.
Birkett, Jas. W., 67 Smith st., B'klyn, N. Y.
Birmingham Machine & Foundry Co., Birmingham, Ala.
Bissell, David, S., 5 Bissell Blk., Pittsburgh, Pa.
Blackburn, S. P. & Co., 370 Atlantic av , Boston, Mass.
Blaisdell, P. & Co., Worcester, Mass.
Blake, W. L. & Co., 111 Commercial st., Portland, Me.
Blakely, J. & Co., 215 Church st., Phila., Pa.
Blakeslee Mfg. Co., Duquoin, Ill.
Blewitt, James, 425 7th av., N. Y.
Boesch, E., 583 Mission st., San Francisco, Cal.
Borden, Selleck & Co., 48 Lake st., Chicago, Ill.
Boston Automatic Car Coupler, 33 North st., Boston, Mass.
Bowes, F. K., 31 Dearborn st., Chicago, Ill.
Bowler & Co., 14 Winter st., Cleveland, O.
Boyle, Thos. G. & Co., 708 Penn av., Pittsb'gh, Pa.
Boynton, Geo. A., 47 B'way, N. Y.
Bradley & Co., Syracuse, N. Y.; 63 Murray st., N. Y.
Brainard & Shepard, 318 B'way, Albany, N. Y.
Brandt, Rudolph, 38 Cortlandt st., N. Y.
Brewer, John S., 146 E. Lake st., Chicago, Ill.
Brigham Journal Bearing Co., 169 Congress st., Boston, Mass.
Brooklyn Railway Supply Co., 37 Walworth st., B'klyn, N. Y.
Brooks, E. J. & Co., 51 Dey st., N.Y.
Brooks, Sweeney & Co., Nashville, Tenn.
Brooks & Co., 112 Liberty st., N.Y.
Brotherhood, Fred., & Co , Charleston, S. C.
Brown Cotton Gin Co. (The), New London, Conn.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Browning, Sisum & Co., 85 Chambers st., N. Y.
Bryant & Lord, 844 W. 6th st., Cincinnati, O.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Bucyrus Foundry & Machine Co., Bucyrus, O.
Buda Foundry Mfg. Co., 185 Dearborn st. (Room 36), Chicago, Ill.
Buda Foundry & Mfg. Co., Buda, Ill.
Bunce, A. C., 31 Broadway, N.Y.
Bunting Bros., 116 William st., N. Y.
Busch, R. B., & Co., Columbus, Ind.
Buss, Frederick B., 175 Dearborn st. (Room 34), Chicago, Ill,
Butterworth & Lowe, Detroit, Mich.
Cahill, Collins & Co., 805 807 N. Main st., St. Louis, Mo.
Cameron, Barkley & Co., Charleston, S. C.
Candee, Chas. E., 13 Dey st., N. Y.
Cannon Granite Torpedo Co., 100 North av., Allegheny, Pa.
Car Track Friction Appliance Co., 19 Tremont Row, Boston, Mass.
Carey, Geo. H., 1 Broadway, N.Y.
Carnegie, Phipps & Co., 48 5th av., Pittsburgh, Pa.
Carpenter, Geo. B. & Co., 208 S. Water st., Chicago, Ill. **31.**
Caswell, Wm. A., 154 E. Lake st., Chicago, Ill.
Central Car Co., 50 State st., Boston, Mass.
Chalmers-Spence Co., 419 E. 8th st., N. Y. **iv.**
Champion Blower & Forge Co., Lancaster, Pa.
Chase, R. G., 71 Kilby st., Boston, Mass.
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
Chicago Car Seal Co., 41 E. Indiana st., Chicago, Ill.
Chicago Car Roofing Co., 113 Adams st., Chicago, Ill.
Chicago Engineer Supply Co., 18 Dearborn st., Chicago, Ill.
Child & Co., O. W., 150 Broadway, N. Y.
Cincinnati Railway Supply Co., 53 W. 2d st., Cincinnati, O.
Claffy, John, 48 Dey st., N.Y. **91.**
Clark, W. W., 95 Dearborn st., Chicago, Ill.
Carkson, John W., 28 Reade st., N.Y.
Cleveland Frog & Crossing Works, 14 Winter st., Cleveland, O.
Cliff & Righter Co. (Ltd.), Oswego, N.Y.
Clinton Mfg. Co., 135 E. Lake st., Chicago, Ill.
Clow, James B. & Son, 222 E. Lake st., Chicago. Ill.
Coatesville Iron Works, 26 W. Lake st. (Room 1). Chicago, Ill.
Cochnower, Perrin & Co., 57 Oliver st., Boston, Mass.
Cochran, Lyman & Co., 6 Public Landing, Cincinnati, O.
Colby Mfg. Co., 163 Albany st., Boston, Mass.
Cole, E. M. & Bro., 47 B'way, N. Y.
Collins & Co., 212 Water st., N.Y.
Columbia Iron Foundry, 36 Front st , Chicago, Ill.
Columbus Brass & Steam Pipe Works Co. (The), 240-242 N. High st., Columbus, O.
Colwell Lead Co., 63 Centre st., N. Y.
Colwell & Canning, 115 B'way, N.Y.
Concave Elliptic Spring Co., 11 Pine st., N.Y.
Coney, Geo. H., 18 B'way, N. Y.
Congdon Brake Shoe Co., 175 Dearborn st., Chicago, Ill.
Consolidated Coupling Co., 173 B'way, N.Y.
Conway, M. W., 487 Monroe st., B'klyn, N. Y.
Cook, A., 313 West st., N.Y.
Cooke & Co., 22 Cortlandt st., N. Y.
Coolbaugh, Frank W., 45 B'way, N.Y.
Copeland Mfg. Co., 234 B'way, N. Y.
Corning, Edward & Co., 18 Cortlandt st., N. Y.

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Covel & Osborne, 71 Pleasant st., Fall River, Mass.
Cowell Platform & Coupling Co., 13 Mercantile Bank Bldg., Cleveland O.
Cowing & Co., Omaha, Neb.
Crane, U. O. & Co., 74 Wall st., N. Y.
Creamer, W. G. & Co., 96 John st., N.Y.
Creed, Richard W., 121 Chambers st., N.Y.
Cremer, H. & Co., Omaha, Neb.
Crerar, Adams & Co., 11-13 5th av., Chicago, Ill.
Crocker, L. O. & Sons, East Braintree, Mass.
Cullers, W. H., 14 Fayette st., Pittsburgh, Pa.
Curtiss, W. L., 261 Main st., Buffalo, N. Y.
Cuthbert, James O., 37 Adams Express Bldg., Chicago, Ill.
Davis & Gratz, 413 Walnut st., Phila., Pa.
Davy, W., Co., 112 S. Clark st. (Room 628), Chicago, Ill.
Dawes & McGettigan, 67 W. Maryland st., Indianapolis, Ind.
Delafield, Tallmadge, 95 Liberty st., N.Y.
Demartini, O., 13 Park Row, N.Y.
Devoe, F. W. & Co., 101 Fulton st., N.Y.
Dickason & Schenck, 505 Rialto Bldg., Chicago, Ill.
Dickson Mfg. Co., Scranton, Pa.
Dillon, J. H., 78 John st., N. Y.
Dilworth, Porter & Co. (Ltd.), Wood. c. Water st., Pittsburgh, Pa.
Donaldson, J. P., Co., 22 Woodward av., Detroit, Mich.
Donegan & Swift, 174 Fulton st., N.Y.
Donovan, D. H., 31 Dearborn st., Chicago, Ill.
Donovan, James J., 12 Barclay st., N. Y.
Dreher Mfg. Co. (The), 188 Pearl st., N. Y.
Dressel, Geo. C. & Co., 719 E. 173d st., N. Y.
Drummond, M. J., 120 B'way, N. Y.
Dunbar, G. & Co., 76 Pearl st., Boston, Mass.
Dunham Mfg. Co., 131 Devonshire st., Boston, Mass.; 117 Adams Ex. Bldg., Chicago, Ill. **25.**
Dwight, E. P., 407 Library st., Phila., Pa.
Eames Vacuum Brake Co., 115 B'way, N. Y.; 123 Oliver st., Boston, Mass.
Eastman Freight Car Heater Co., 50 State st., Boston, Mass.
Edgerton, G. M., 204 N. 3d st., St. Louis, Mo.
Edmonds, John W., 270 West st., N. Y.
Eldridge, T. H., Norwich, Conn.
Elliot, H. & H., St. Louis, Ill.
Ellis, J. C., 18 Wall st., N. Y.
Ellis, W. R., 18 B'way, N. Y.
Ellithorpe Air Brake Co. (The), 54 Waldo pl., Chicago, Ill.
Emley & Co., Indianapolis, Ind.
Enos Electric Railway Supply Co., 61 Court st., Boston, Mass.
Etting, Edward J., 222 S. 3d st., Phila., Pa.
Evans, G. A., 40 Wall st., N. Y.
Evans, Henry C., 32 Nassau st., N. Y.
Ewing, Mitchell & Co., 137 1st av., Pittsburgh, Pa.
Fairbanks & Co., 362 B'way, N. Y.
Fawtt, J. J., Springfield, O.
Felt, F. B., 234 Clark st., Chicago, Ill.
Fey, John, 47 B'way, N. Y.
Fiske, Alex. P., 66 B'way, N. Y.
Foote, Cleveland, 40 B'way, N. Y.
Foote, Emerson, 40 B'way, N. Y.
Fowler Rolling Mill Co., 185 Dearborn st., Chicago, Ill.
Fowler Steel Car Wheel Co., 185 Dearborn st., Chicago, Ill.
Fox, H. L. & Co., 414 N. 9th st., St. Louis, Mo.
Fox, John, 160 B'way, N. Y.
Foxwell, John B., 53 B'way, N. Y.
Frank, J., 40 Wall st., N. Y.
Frankel, H. U., 151 3d st., Louisville, Ky.
Freeport Machine Co., Freeport, Ill.
French, S. A., 400 Broome st., N. Y. **65.**
French, A., Spring Co. (Ltd.), 115 B'way, N. Y.
Frink, W. B. & Co., 27 Doane st., Boston, Mass.
Fuller, Dana & Fitz, 110 North st., Boston, Mass.
Garratt, W. T., 138-142 Fremont st., San Francisco, Cal.
Garrison, D. E. & Co., 221 Olive st., St. Louis, Mo.
Gates, J. W. & Co., St. Louis, Mo.
Gates Iron Works, 50 Clinton st., Chicago, Ill.
George, E. & Co., 82 South st., N. Y.
Gerhart & Shaaber, Reading, Pa.
Gerrish J. J. & Co., Portland, Me.
Giannini, G. W., 503 W. 42d st., N. Y.
Gibbons' Boltless Rail Joint Co., 45 Maiden la., N. Y.
Gilfillan Reclining Car Seat Co., 204 N. 2d st., St. Louis, Mo.
Gill, Thompson C. & Co., 210 S. 3d st., Phila., Pa.
Gilmore, F. F. & Co., 125 W. Main st., Louisville, Ky.
Godeffroy, A. E., 43 New st., N. Y.
Godig, A., 599 Milwaukee av., Chicago, Ill.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Gorton & Co., 40 White Bldg, Buffalo, N. Y.
Goulds & Austin, 169 E. Lake st., Chicago, Ill.
Granular Metal Co., 34 Beach st., Boston, Mass.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Green, W. H., 34 S. 2d st., Phila., Pa.
Green, Tweed & Co., 83 Chambers st., N. Y.
Gregory, H. P. & Co., 2 California st., San Francisco, Cal.
Gregory & Thompson, 234 Lake st., Chicago, Ill.
Grier, E. Lindsay, 87 Water st., Pittsburgh, Pa.
Griswold & Gillett, 3 Wall st., N. Y.
Guest, W. A., 38 Pine st., N. Y.
Gurney, C. H. & Co., 247 and 249 E. Lake st., Chicago, Ill.
Hall, John S., 40 Cortlandt st., N. Y.
Hamilton, J. M. & Co., Nashville, Tenn.
Harmon, Gibbs & Co., Corry, Pa.
Harrigan Mfg. Co., 43 Milk st., Boston, Mass.
Harrington, E., Son & Co., N. 15th st., c. Penn av., Phila., Pa.
Harris, T. William & Co., 46 B'way, N. Y. **79.**
Hart, Henry, C. Mfg. Co., 492 Franklin st., Detroit, Mich.
Hartwell, H. B. & Co., 337 W. Main st., Louisville, Ky.
Hasell, B. D. & Co., 66 Pine st., N. Y.
Hatry, A. G., 605 Smithfield st., Pittsb'gh, Pa.
Hawkins' R. F. Iron Works, 200 Liberty st., Boston, Mass.
Hayes, Edwin A., 262-263 West st., N. Y.
Haynes Car Axle Box Co., Kansas City, Miss.
Hazen Co. (The), 4th, c. Main st., Cincinnati, O.
Heartt, J. S. & Co., Allston st., Boston, Mass.
Herrick, Bauman L., 50 Wall st., N. Y.
Hewitt Box Lid Co., 185 Dearborn st., Chicago, Ill.
Hewitt Car Door Co., 185 Dearborn st. (Room 36), Chicago, Ill.
Hewitt Mfg. Co., 185 Dearborn st. (Room 36), Chicago, Ill.
Heyn, Alfred, 47 B'way, N. Y.
Hicks & Smith, 175 Dearborn st. (Room 12), Chicago, Ill.
Hien Car Coupling Co., 234 Clark st., Chicago, Ill.
Hien Gravity Lock Car Coupler Co., 234 S. Clark st., Chicago, Ill.
Hite, W. W. & Co., 176-178 4th st., Louisville, Ky.
Holman, D. F., 94 Dearborn st., Chicago, Ill.
Hooks Smelting Co., N. Broad, c. Hamilton st., Philadelphia, Pa.
Hoole Mfg. Co., 46 Bond st., N. Y.
Hopkins, D. A., 113 Liberty st., N.Y.
Hoppe, Paul F., 107 Liberty st., N.Y.
Hotchkiss, G. C., Field & Co., 624 E. 14th st., N.Y.
Houston Rolling Mills, Houston, Tex.
Howard, J. L. & Co., 448 Asylum st., Hartford, Conn.
Howard, Childs & Co., 605 Smithfield, st., Pittsburgh, Pa.
Howard Iron Works, Buffalo, N.Y.
Howard & Mannering, 179 W. Pearl st., Cincinnati, O.

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Hoxsey, Thos. B., 45 B'way, N.Y.
Hoyt Railroad Track Crossing Co., 237 La Salle st., Chicago, Ill.
Hulbert, W. H. & Co., 106 Canal st., Cleveland, Ohio.
Humphreys & Sayce, 10 Wall st., N.Y.
Huntington, Hopkins & Co., junc. Market & Bush sts., San Francisco, Cal.
Husband, C. & Co., Taunton, Mass.
Inness, Thos. B. & Co., 115 B'way, N.Y.
International Railway Tie Co., 43 Milk st., Boston, Mass.
Iron Car Co. (The), 115 B'way, N.Y.
Iron City Tool Works (Ltd.), Penn av. & 23d st., Pittsburgh, Pa.
Jacob's Life Saving Car Coupler, 94 Dearborn st., Chicago, Ill.
James, C. E. & Co., Chattanooga, Tenn.
Jeffrey Mfg. Co (The), Columbus, O.
Jersey City Iron Works, 587 Henderson st., Jersey City, N. J.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Jersey City Wheel Foundry & Machine Works (The), 151 Green, c. Pearl st., Jersey City, N. J.
Jesup, F. W. & Co., 67 Liberty st., N.Y.
Johns, Thompson Co. (The), 46 Public Landing, Cincinnati, O.
Johnson, H. J., 530 Water st., N.Y.
Johnson Railway Heater Co., 35 Congress st., Boston, Mass.
Johnson Steel Street Rail Co., Johnstown, Pa. **55.**
Johnston, R. R. Frog & Switch Co., 307 Walnut st., Philadelphia, Pa.
Jones & Laughlins (Ltd.), W. Lake st., c. N. Canal st., Chicago, Ill.; 3d av., c. Try st., Pittsburgh, Pa.
Jordan, F., 200 Broadway. N.Y.
Jordan & Gottfried, 208 Canal st., N.Y.
Joyce, Cridland & Co., Wyandot & R. R., Dayton, O. **27.**
Katzenstein, L. & Co., 357 West st., N.Y.
Kay Bros. & Co., 121 Water st., Pittsburgh, O.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Kelley, G. C., Birmingham, Ala.
Kent, J., 70 Kilby st., Boston, Mass.
Kessler, W. S. & Co., 115 Dearborn st., Chicago, Ill.
Killourne, Jones & Co., Columbus, O.
Kimbark, S. D., 71-81 Michigan av., Chicago, Ill.
King, Albert H., 44 B'way, N.Y.
King, J. M. & Co., Waterford, N.Y.
Kinsley Iron & Machine Works, Canton, Mass.
Kinzer & Jones, 107-111 Penn av., Pittsburgh, Pa.
Kirkwood, A. J. & Co., 171 Lake st., Chicago, Ill.
Knapp Mfg. Co. (The) 22-24 Frankfort st., N.Y.
Knight & Jillson, Indianapolis, Ind.
Ladd, A. W., 96 B'way, N.Y.
Lake Erie Iron Co., 101 St. Clair st., Cleveland, Ohio.
Lappin Brake Shoe Co., 239 B'way, N.Y.
Larned, F. T., 280 B'way, N.Y.
Lawson, T. R., 186 W. 2d st., Cincinnati, O.
Leach, H. L., 30 Oliver st., Boston, Mass.
Leatherold Mfg. Co., 38 Reade st., N.Y.
Leavitt, C. W. & Co., 161 B'way, N.Y.
Leishman & Snyder, 605 Smithfield st., Pittsburgh, Pa.
Leonard & McCoy, 118 Liberty st., N.Y.
Leveaux, H. E., 15 Mercantile Bank Bldg., Cleveland, O.
Levis, Henry & Co., 10 Wall st., N.Y.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N.Y.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lindley, E. H., 714 N. 2d st., St. Louis, Mo.
Luidley, H., Augusta, Ga.
Lock, Nut, Bolt & Iron Co., 79 Cedar st., N.Y.
Locomotive Improvement Co., 43 Milk st., Boston, Mass.
Logan, Gregg & Co., 306 Wood st., Pittsburgh, Pa.
Lombaert Mfg. Co., 236 N. Water st., Phila., Pa.
Lonergan, J. E. & Co., 211 Race st., Phila., Pa.
Long & Co., 91 5th av., Pittsburgh, Pa.
Lorraine Automatic Car Coupler Co, 322 Pine st., St. Louis, Mo.
Louis, Adolphus H., 143 Maiden Lane, N.Y.
Louisville Car Wheel & Railway Supply Co., Louisville, Ky.
Lovejoy, Jno. F. & Co., 102 Chambers st., N.Y.
Lyman, Frank, 130 Water st., N.Y.
McAllaster, A. S., 183 Franklin st., Buffalo, N.Y.
McAnerney, J. & Co., 53 Trinity pl., N.Y.
McBain, Thos. A., 640 W. 38th st., N.Y.
McCoy & Sanders, 26 Warren st., N.Y.
McGill Bros. & Co., 304 Dearborn st., Chicago, Ill.
McGregor, W. & Co., 53-55 S. Clinton st., Chicago, Ill.
McGuire & Jager, 122 N. Sangamon st., Chicago, Ill.
McKenna, T. J., 120 B'way, N.Y.
McLean, A. B. & Co., Duluth, Minn.
McSherry, D. E. & Co., 1126-1130 E. 3d st., Dayton, O.
Macey & Co., Nashville, Tenn.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Mallinchrodt Street Car Brake Co., 8 S. 4th st., St. Louis, Mo.
Mallory, W. S. & Co., 22 W. Randolph st., Chicago, Ill.
Manning, Maxwell & Moore, 111 Liberty st., N.Y.
Marks Automatic Car Coupler Co, 29 Euclid av., Cleveland, O.
Marshland, F. E., 84 W. B'way, N.Y.
Martin, Rich., 116 John st., N.Y.
Martin, Rufus, & Co., 114 Nassau st., N.Y. **52.**
Martine, S. A. & Co., 84 Reade st., N.Y.
Mass. Portable R. R. Co., 230 Washington st., Boston, Mass.
Mayer & Co., Norfolk, Va.
Meneely, G. R. & Co., West Troy, N.Y.
Mengis, M. C., 3 Beaver st, N.Y.
Mercer Rubber Co., Trenton, N.J.
Merchant & Co., 9 Burling sl., N.Y.; 317 Arch st., Phila, Pa.
Metcalf, Paul & Co., 7th av., c. Smithfield st., Pittsburgh, Pa.
Metzler Lantern Co., 4948 Gtn. av., Phila., Pa.
Meysenburg, O. W. & Co., 185 Dearborn st. (Room 7), Chicago, Ill.
Middleton, N. & A. & Co. (Ltd.), 185 Dearborn st., Chicago, Ill.
Miles, R. M. & Co., 45 B'way, N.Y.
Miller, E., 6 Park pl., N.Y.
Minnigerode & Co., 40 B'way, N.Y.; 36 Carondelet st., New Orleans, La.
Mitchell, J. E., 310 York av., Phila., Pa.
Montgomery & Co., 105 Fulton st., N.Y. **8.**
Morton, A. M. & Co., 25 Washington st., Boston, Mass.
Monarch Car Mover Co., 21 Duhl Blk., Detroit, Mich.
Montgomery & Co., 105 Fulton st., N.Y.
Morden Frog & Crossing Works, 234 S. Clark st., Chicago, Ill.
Morris, Lewis & Co., 226 W. Main st., Louisville, Ky.
Morrison, Geo. A., 171 B'way, N.Y.
Motley, Thornton N., 26 Liberty st., N.Y.
Mueller, Christie & Raber, 236 S. Water st., Chicago, Ill.
Munngerde & Ellerbe, Birmingham, Ala.
Murdock & Co., 15 7th av., Pittsburgh, Pa.
National Car Spring Co., 185 Dearborn st., Chicago, Ill.
National Interlocking Switch & Signal Co., 140 Nassau st., N.Y.
National Lubricator Co., 3 Tribune Bldg., Chicago, Ill.
Nathan Mfg. Co., 92-94 Liberty st., N.Y.
National Railway & Street Rolling Stock Co., 191 High st., Boston, Mass.
National Transportation Motor Co., 6 Wall st., N.Y.

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Naylor & Co., 99 John st., N. Y.
Neumann & Haas, 1 B'way, N. Y.
Newths Locomotive Ash Pan Co., Detroit, Mich.
New Albany Rail Mill Co., 185 Dearborn st. (Room 7), Chicago, Ill.
New Era Mfg. Co. (The), 73 N. Ashland av., Chicago, Ill.
New Era Railroad Builder (The), 63-83 N. Ashland av., Chicago, Ill.
Newhall Co., Henry B., 105 Chambers st., N.Y.
New Haven Car Trimming Co., 71-73 Goffe st., New Haven, Conn.
New Orleans Railway Supply & Mfg. Co., 98 Common st., New Orleans, La.
N. Y. Equipment Co., 10 Wall st., N. Y. **95.**
N. Y. Lead, Seal & Press Co., 112 Liberty st., N. Y.
N. Y. Locomotive Works, 34½ Pine st., N. Y.
N. Y. Patent Safety Gate Co. (Room 69), 71 Broadway, N. Y.
N. Y. R'way, Press & Seal Co., 18 B'way, N. Y.
N Y. Railway Supply Co. (Ltd.), 40 Wall st., N. Y.
N. Y. Supply Co. (Ltd.), 50 John st., N. Y.
N. Y. Weather Strip Co., 14 Barclay st., N. Y.
Nightingale, S. G., & Childs, 134 Pearl st., Boston, Mass.
Niles Coal Works, Hamilton, O.
Nock, G. F., 176 Fulton st., N. Y.
Non-Packing Valve Co., 432 Broome st., N. Y.
North Am. R'way Improvement Co., 170 B'way, N. Y.
North Chicago Rolling Mill Co., 17 Metropolitan Bldg., Chicago, Ill.
Northwestern File Works, 65-69 S. Canal st., Chicago, Ill.
Noyes Bros. & Cutler, St. Paul, Minn.
Noyes Mfg. Co., 47 India st., Boston, Mass.
Nunemacher, F. C., Supply Co., 335 W. Main st., Louisville, Ky.
Offutt & Co., 53 Trinity place, N. Y.
Ohl & Co., 430 Walnut st., Phila., Pa.
Oliver Bros. & Phillips, Pittsburgh, Pa.
Packard, O. L., Milwaukee, Wis.
Page, Wm. E., 3 Cotton Exchange, N. Y.
Palmer, T. G. & Co., 868 Broadway, N. Y.
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Patent Metallic Weather Strip Co., 74 W. 23d st., N. Y.
Patent Shaft & Axletree Co., 185 Dearborn st., Chicago, Ill.
Patten, J. T., 18 Broadway, N. Y.
Patterson, H. T. & Co., 146-150 Centre st., N. Y.
Patterson Bros., Phila., Pa.
Peabody, Henry W. & Co., 70 Kilby st., Boston, Mass.; 31 New st., N. Y.
Peatty & Perry, 38 Cortlandt st., N. Y.
Pemberthy Injector Co., Detroit, Mich.
Peters, G. D. P. Co., Moorfields, London, Eng.
Pettibone, Mulliken P. Co., 188-190 E. Washington st., Chicago, Ill.
Pit, W. C., Bangor, Maine.
Pittsburgh Forge & Iron Co., 10th st., n. Penn av., Pittsburgh, Pa.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Place, Geo., 121 Chambers st., N. Y. **81.**
Plumb, Fayette R., Phila., Pa.
Pneumatic Gate Co., 99 E. Washington st. (Room 22), Chicago, Ill
Poage, J. N., Harriett, c. New Court st., Cincinnati, O.
Pollock, Alex., 212 West st., N. Y. **32.**
Pope, J. J. & Bro., 292 Pearl st., N. Y.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Powell, W. Co. (The), 50 Plum st., Cincinnati, Ohio.
Powell & Lord, 218 La Salle st., Chicago, Ill.
Prentiss Tool & Supply Co. (The), 42 Dey st., N. Y.
Prescott, G. W., 204 N. 3d st., St. Louis, Mo.
Prosser, Thos. & Son, 15 Gold st., N. Y.
Protective Ventilator Co., 153 Fulton st., N. Y.
Pugh, R. H., 115 Dearborn st., Chicago, Ill.
Pugh & Russell, 280 B'way, N. Y.; 511 Phœnix Bldg., Chicago, Ill.
Pugsley & Chapman, 8 Liberty st., N. Y.
Putnam & Foley, 127 Milk st., Boston, Mass.
Quickel, H. F., Harrisburg, Pa.
Railroad Car Stencil Co. (The), 205 La Salle st. (Room 301), Chicago, Ill.
Railroad Equipment Co., 34 Pine st., N. Y.
Railroad Lamp & Signal Co., 185 Dearborn st., Chicago, Ill.
Railroad Switch Signal & Gate Co., 218 La Salle st., Chicago, Ill.
Railway Cab Electric Signal Co., 40 B'way, N. Y.
Railway Register Co., 59 State st., Chicago, Ill.
Railway Register Mfg. Co., 426 Walnut st., Phila., Pa.
Railway Safety Appliance Co., 43 Milk st., Boston, Mass.
Railway Telegraph Supply Co., 210 N. 3d st., St. Louis, Mo.
Ramapo Iron Works, Hillburn, N. Y.
Ramapo Wheel & Foundry Co., 115 B'way, N. Y.
Ramsey, R. H., 230 E. Chelton av., Phila., Pa.
Rasmussen Cable Co., 59 State st., Chicago, Ill.
Reliance Gauge Co. (The), 89 Euclid av., Cleveland, O.
Richardson, L. N. & Co., Vicksburg, Miss.
Ripley & Kimball, 907-911 N. Main st., St. Louis, Mo.
Robbins, John, 58 Kneeland st., Boston, Mass.
Robinson & Cary, St. Paul, Minn.
Robinson & Orr, 115 Water st., Pittsburgh, Pa. **72.**
Rogers, G. J., Petersburg, Va.
Rogers, H. A., 19 John st., N. Y. **1v.**
Rowell American Switch Co., 186 Devonshire st., Boston, Mass.
Rumsey, L. M. Mfg. Co., 810 N. 2d st., St. Louis, Mo.
Russell, Boynton & Co., 210 3d st., S., Minneapolis, Minn.
Ryan, J. J. & Co., 62 W. Monroe st., Chicago, Ill.
Ryerson, J. T. & Son, 20 Milwaukee av., Chicago, Ill.
St. Louis Railway Supplies Mfg. Co. 801 N. Main st., St. Louis, Mo.
St. Louis Reclining Car Seat Co., Grand Pacific Hotel, Chicago, Ill.
Safety Electric Construction Co., 41 Wall st., N. Y.
Saunders, E. A. & Co., 85 West st., N.Y.
Sawyer, C. H. & R. W., Bangor, Me.
Saxton, J. C., 52 Broadway, N. Y.
Schræder, A., 94 E. Washington st. (Room 22), Chicago, Ill.
Scranton Steel Co., Scranton, Pa.
Seipel, John, 90-92 Park row, N.Y.
Sellers, Morris & Co., 59 S. Clark st. (Room 6), Chicago, Ill.
Sellers, Wm. & Co., 1600 Hamilton st., Philadelphia, Pa.
Semple, W. & A. C., 244 W. Main st., Louisville, Ky.
Sharpneck Anti-Friction Journal Box Co. (The), 134 E. Van Buren st. (Room 66), Chicago, Ill.
Shays, E. D. & Co., 116 W. 2d st., Cincinnati, Ohio.
Sheffield, G. S. & Co., Three Rivers, Mich.
Sherburne & Co., 53 Oliver st., Boston, Mass.
Sigwalt Mfg. Co., 15 S. Canal st., Chicago, Ill.
Smith, Frank M, 205 La Salle st. (Room 70), Chicago, Ill.
Smith, G. A., Richmond, Va.
Smith, R. A. C., 69 Wall st., N. Y.
Smith, T. G., 15 Chapin Block, Buffalo, N. Y.
Solidar Bros., 85 Broadway, N.Y.
Soltman, C. G., 119 Fulton st., N.Y.
Southern Railway Supply Co., Richmond, Va.
Sprague Electric Railway & Motor Co., 185 Dearborn st. (Room 10), Chicago, Ill.; 16 Broad st., N.Y.
Standard Car Heating & Ventilating Co. (The), Penn Bld., Pittsburgh, Pa.
Standard Electric Railway Signal Co., 53 Broadway, N.Y.

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Standard Index & Register Co., 136 Fulton st., N. Y.
Standard Mfg. Co., Fort Wayne, Ind.
Standard Tool Co., Cleveland, O. **49.**
Stark Nut Lock Co.,280 B'way, N.Y.; 185 Dearborn st. (Room 91), Chicago, Ill.
Steam Gauge & Lantern Co., 23 Murray st., N. Y.
Stearns Railway Improvement Co., 176 Broadway, N.Y.
Steel, Birdwell & Ford, Minneapolis, Minn.
Stewart & Mattson Mfg. Co. (The), 2042 N. 10th st., Philadelphia, Pa.
Strang, A. L., Co., Omaha, Neb.
Street Railway Supply Co., Herald st., c. Dell av., Cleveland, O.
Strong, Carlisle & Turney, 82 Water st., Cleveland. O.
Stroud & Co., 104 John st., N. Y.
Sweney, J. P. & Co., 601 N. Main st., St. Louis, Mo.
Sylvester & Co., 6 Oliver st., Boston, Mass.
Tallman Automatic Car Brake Co., 171 B'way, N. Y.
Taylor, Richard, 51 Beaubien st., Detroit, Mich.
Tebbets Bros., Rochester, N. Y.
Thill Coupler & Anti-Rattler Co., 125 Dearborn st., Chicago, Ill.
Thompson & Bushnell, 120 Liberty st., N. Y.
Thorne, Chas. T., 72 Wall st., N. Y.
Tolman, Henry, 153 N. 3d st., Phila., Pa.
Townsend, I., 203 N. 3d st., Phila., Pa.
Trans-Continental Car Lock & Seal Co., 57 State st., Chicago, Ill.
Tredegar Iron Works, Richmond, Va.
Trenor, Henry H., 122 Chambers st., N. Y.
Trenton Vice & Tool Works, Trenton, N. J.
Triple Thermic Motor Co., 33 Broad st., N. Y.
Troxell, A. D. & Co., 48 N. 4th st., Phila., Pa.
Tucker, Cummings, H., Jr., 120 Liberty st., N. Y.
Turton, Thomas & Sons (Ltd.), 40 Kilby st., Boston, Mass.
Turner-Beard Automatic Brake Co., 32 Equitable Bldg., Boston, Mass.
Union Hydraulic Works, Philadelphia, Pa.
Union Switch & Signal Co. (The), 205 La Salle st. (Room 70), Chicago, Ill.
United Mfg. Co., Indianapolis, Ind.
U. S. Automatic R. R. Gate & Signal Co., 704 B'way, N. Y.
United States Car Coupler Co., 4 Sears Bldg., Boston, Mass.
United States Rolling Stock Co., 189 La Salle st., Chicago, Ill.
United States Supply Co. (Ltd.), 51 John st., N. Y.
Universal Automatic Lubricator Co., 18 B'way, N. Y.
Urquhart, John S., 46 Cortlandt st., N. Y.
Utica Head Light Works, 189 Lake st., Chicago, Ill.
Upson Nut Co., Cleveland, O.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Van Wagenen, George, 233 West st., N. Y.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Verona Tool Works, 66 S. Clinton st., Chicago, Ill.
Vitrified Wheel Co., Westfield, Mass.
Vulcanized Fibre Co., 14 Dey st., N. Y.; Wilmington, Del. **93.**
Waulbaum, W. H., Phila., Pa.
Wagner, C. P. & Co., 20 Broadway, Cincinnati. Ohio.
Walker, H. M., 56 La Salle st. (Room 72), Chicago, Ill.
Walker, Walter J., 32 Nassau st., N. Y.
Walton Mfg. Co., 30 Church st., N. Y.
Ward Axle, Brake & Coupler Co., 87 Diamond st., Pittsburgh, Pa.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Washburn Car Wheel Co., Worcester, Mass.
Waterbury, Chas. L., 94 Liberty st., N. Y.
Watrous, H., 51 Ferry st., N. Y.
Watts, John M. & Sons, 121 S. Water st., Phila., Pa.
Webb, Henry G., 39 Dey st., N. Y.
Weber, C. W. B., 81 New st., N. Y.
Webster Brake Co., 23 Dey st., N. Y.
Western Agency (Ltd.), 81 New st., N. Y.
Weir Frog Co. (The), Smith, c. Water st., Cincinnati, O. **47.**
Wharton, W. Jr. & Co. (Ltd.), 330 Walnut st., Phila., Pa.
Wharton Railroad Switch Co. (The), 125 S. 4th st., Phila., Pa.
Wheeler & Holden, 13 Swan st., Buffalo, N. Y.
Whitch, T. J. & Son, Dayton, O.
White, E. V. & Co., Norfolk, Va.
White, Reynolds T., 39 B'way, N. Y.
Whitman Agricult. Co., 8th & Clark av., St. Louis, Mo.
Whiton, Augustus S., 115 B'way, N.Y.
Whiton, Wm. H., 69 Liberty st., N.Y.
Wilkins, W. B., 115 B'way, N. Y.
Wilkins Locomotive Car Coupler, 113 Devonshire st., Boston, Mass.
Williams, I. A. & Co., 89 Lake st., Chicago, Ill.
Williams, Dimond & Co., 202 Market st., San Francisco, Cal.
Williams, Page & Co., 24 Beach st., Boston, Mass.
Williamson & Cassidy, 24 S. 4th st., Philadelphia, Pa.
Wilson, G. A. & Co., 605 Smithfield st., Pittsburgh (Pa.
Wilson, Walker & Co. (Ltd.), 70 Kilby st., Boston, Mass.
Wilson & Brook, 95 5th av., Pittsburgh, Pa.
Wind, Chas. D. & Co., 113-115 Morgan st., St. Louis, Mo.
Wing Mfg Co., 13 Moore st., N.Y.
Woodhouse & Forster, 12 Barclay st., N.Y.
Woodman, R., 169 High st., Boston, Mass.
Woodwell, W. E. & John, 632 Smithfield st., Pittsburgh, Pa.
Worcester Steel Works, Worcester, Mass.
Worcester, Francis, 108 5th av., Chicago, Ill.
Wright Construction Co., 504 Phœnix Bldg., Chicago, Ill.
Wright, G. H., 68 Wall st., N.Y.
Wyckoff, A. & Son, Elmira, N. Y.
Wyeth, J. H., 221 Chestnut st., St. Louis, Mo.
Yale, J. L., 101 St. Clair st., Cleveland, O.

Supplies—Steamship

Baxter, John F., 308 West st., N.Y.
Blake, W. L. & Co., 409-111 Commercial st., Portland, Me.
Buck & Co., M. M., 209 N. 3d st., St, Louis, Mo.
Cook & Co., 22 Cortlandt st., N.Y.
Donaldson, J. P. Co., 22 Woodward av., Detroit, Mich.
Donegan & Swift, 174 Fulton st., N.Y.
Motley, Thornton N., 26 Liberty st., N. Y.
N. Y. Supply Co., 50 John st., N.Y.
Offutt & Co., Church & Rector sts., N.Y.
Pollock, Alex., 212 West st., N. Y. **32.**
Reilly, James, 230 West st., N.Y.
Rogers, H. A., 19 John st., N. Y. **iv.**
Stewart & Matson Mfg. Co. (The), 2042 N. 10th st., Philadelphia, Pa.
Williamson & Cassidy, 24 S. 4th st., Philadelphia, Pa.
Williams, H., 360 Kent av., Brooklyn, N.Y.

Street Rail Road Supplies.

Adams & Westlake Co. (The), 115 B'way, N. Y.
Andrews, Frank H., 645 W. 33d st., N.Y.
Bowler & Co., 14 Winter st., Cleveland, O.
Brill, J. G., Co., Phila., Pa.
Brooklyn Roadway Supply Co. (The), 44 Walworth st. Brooklyn, N. Y.
Brownell & Wight Car Co., 2300 Broadway. St. Louis, Mo.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Child, O. W. & Co., 150 Broadway, N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Dederick, Z. P., Sherman, Texas.
Dorner & Dutton, 14 Winter st., Cleveland, O.

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Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Dwight, E. P., 407 Library st., Phila., Pa.
Foote, Orlo A., Cleveland, O
French, S. A., 400 Broome st., N. Y. **65.**
Fulton Foundry, 22 Merwin st., Cleveland, O.
Greeley, E. S. & Co. (The), 5-7 Dey st., N. Y.
Hains Bros., 55 Broadway, N. Y.
Hartford Woven Wire Mattress Co. (The), P. O. Box 363, Hartford, Conn.
Hathaway & Robison, 14 Case Bldg., Cleveland, O.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Jesup, F. W. & Co., 67 Liberty st., N. Y.
Johnson Steel Street Rail Co., Johnstown, Pa.; Mutual Life Bldg., N. Y.; 6 Oliver st., Boston; Bullitt Bldg., Phila.; Grant and 6th sts., Pittsburgh; Johnston Bldg., Cincinnati; Phœnix Bldg., Chicago; Bank of Commerce Bldg., St. Louis; Cotton Exchange Bldg., New Orleans. **55.**
Kaufholz Bros., 106-108 Canal st., Cleveland, Ohio.
Keefer, Horace A. & Co., 54 Sheidley Bldg., Kansas City, Mo. **88.**
Kimbark, S. D., Michigan av. and Lake st., Chicago, Ill.
Lewis & Fowler Mfg. C. (The), 27-35 Walworth st., Brooklyn, N. Y.
McBain, Thos. A., 640 W. 38th st., N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Metallic Street Railway Supply Co., Albany, N. Y.
Peters & Calhoun Co., 33 Warren st., N. Y.
Phœnix Steel Wire Broom & Brush Co., 199 E. Randolph st., Chicago, Ill.
Post & Co., Cincinnati, O.
Pugh & Russell, 280 Broadway, N. Y.
Russell Mfg. Co., Middletown, Conn.
Saxton, J. C., 52 Broadway, N. Y.
Smith, Josephine D., 350 Pearl st., N. Y.
Stephenson, John, Co. (Ltd.), 47 E. 27th st., N. Y.
Street Railway Supply Co., Cleveland, O.
Wales Mfg. Co., 76 E. Water st., Syracuse, N. Y. **79.**
Way, Rhodes & Blankley, 23d & Wood sts., Phila., Pa.
Wm. Wharton, Jr. & Co. (Inc.), 25th st. & Washington av., Phila., Pa.
White, Edward C., 530 W. 33d st., N. Y.
White, Thos. C., 107 S. 8th st., St. Louis, Mo.

Supplies—Street Railway (Bedding).

Mellin & Co., 142 Worth st., N. Y.

Supplies—Telegraph & Electric (Hard Rubber).

Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Boston Rubber Shoe Co., Boston, Mass.
Butler Hard Rubber Co., 33 Mercer st., N. Y.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Coes, L., Worcester, Mass.
Geddes, bRoert C., 316 Market st., Phila., Pa.
Girvin & Co., 24 California st., San Francisco, Cal.
Goodrich Co. B. F., (The), Akron, O.
Gutta Percha & Rubber Mfg. Co., 15 1st st., San Francisco, Cal.
Janney & Congdon, 8 N. Charles st., Baltimore, Md.
Keating, Geo. P., 230 Market st., Phila., Pa.
New York Belting & Packing Co., 15 Park Row, N. Y. **v.**
Revere Rubber Co., 66 Franklin st., Boston, Mass.; 64 Reade st., N. Y.
Troy Belting & Supply Co., 550 Fulton st., Troy, N. Y.
Tyler Rubber Co., 90 Franklin st., Boston, Mass.
Universal Rubber Co. (The), 45 Rose st., N. Y.

Supplies—Telegraph and Telephone.

Am. Electrical Works, 15 Cortlandt st., N. Y.
Anderson, James, 55 Liberty st., N. Y.
Applegate Electric Floor Mat Mfg. Co., 35 Market st., Camden, N. J.
Averell Insulating Conduit Co., 44 B'way, N. Y.
Baldwin, James, Co. (The), Manchester, N. H.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Boston Electric Co., 548 Washington st., Boston, Mass.
Brownlee & Co., Detroit, Mich.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Butler, Jay C., & Co., Sandusky, O.
Campbell Electrical Supply Co., 52 Fulton st., N. Y.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Day, Austin G., 16 Dey st., N. Y.
Detroit Electrical Works, 7th and Woodbridge sts., Detroit, Mich.
Electric Gas Lighting Co. (The), 35 Arch st., Boston, Mass.
Electrical Supply Co., 17 Dey st., N. Y.
Empire City Electric Co., 15 Dey st., N. Y.
Fetter Drive Screw Co., 104 John st., N. Y.
Frasse & Co., 92 Park Row, N. Y.
Greeley, E. S., & Co., 5 Dey st., N. Y.
Hotchkiss, Clark B., 16 Dey st., N. Y.
Hungerford, Hawley P., 17 Dey st., N. Y.
India Rubber Comb Co., 11 Mercer st., N. Y.
India Rubber & Gutta Percha Insulating Co., 537 W. 21th st., N. Y.
Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**
Ketcham, J. M., & Co., 76 W. 125th st., N. Y.
Law Telephone Co., 112 Liberty st., N. Y.
Leatheroid Mfg. Co., 38 Reade st., N. Y.
Lyman, A. B., 36 S. Water st., Cleveland, O.
Merchants' Mfg. & Construction Co., 54 Broad st., N. Y.
Meserole, A. V., 26 Church st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Miller, Henry, 670 Hudson st., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Morgan, B. L. & Co., Louisville, Ky.
Newhall, Henry B. Co., 105 Chambers st., N. Y.
New York Electric Lines Co., 37 Wall st., N. Y.
N. Y. Supply & Equipment Co., 50 John st., N. Y.
Novelty Electric Co., 5th, and Locust sts., Phila., Pa.
Okonite Co., 13 Park Row, N. Y. **11.**
Partrick & Carter, 114 S. 2d st., Phila., Pa. **69.**
Pearce & Jones, 79 John st., N. Y.
Pettingill, F. E., & Co., 167 Congress st., Boston, Mass.
Pittsburgh Electric Co., 213 Wood st., Pittsburgh, Pa.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Prentis, V., Electric Mfg. Co., 45 Dey st., N. Y.
Railway Telegraph & Telephone Co., 2 W. 14th st. N. Y.
Raynor, Hiram M., 25 Bond st., N. Y.
Rhode Island Telephone & Electric Co., Providence, R. I.
Ricketts, T. M. Co., 18 Cortlandt st., N. Y.
Royce & Marean, 1408 Pennsylvania av., Washington, D. C.
Russell, Albert L., 109 Court st., Boston, Mass.
Smith, Otis A., Rock Fall, Conn.
Standard Electric Co., 502 4th av., Louisville, Ky.
Standard Electrical Works, c. Pearl and Elm sts., Cincinnati, O.
Standard Underground Cable Co., Penn. Bldg., Pittsburgh, Pa.
Stout-Meadowcroft Co., 21 Ann st., N. Y.
Telegraph Specialties Mfg. Co., 111 Pearl st., N. Y.
Ternan, Walter A., 95 Liberty st., N. Y.
Than, Henry, 130 Fulton st., N. Y.
Thompson & Adams, Olean, N. Y.
Union Indurated Fibre Co., 37 Barclay st., N. Y.
United States Electrical Co., 43 Wall st., N. Y

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Western Electric Co., 227-251 S. Clinton st., Chicago, Ill.
Western Electric Co., 70 Trinity pl., N. Y.
Williams, Chas., Jr., 115 Court st., Boston, M.
Wirsching, Aloys, 8 Reade st., N. Y.

Supplies—Steam Fitters.

Albany Steam Trap Co., Albany, N. Y.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Clow, James B., & Son, 214 Lake st., Chicago, Ill.
Griffing, A. A., Iron Co., 608 Communipaw av., Jersey City, N. J. **78.**
Kroeschell Bros., 4 Michigan st., Chicago, Ill.

Supplies—Track.

Allison Mfg. Co. (The), Philadelphia, Pa.
Andrews, Frank H., 545 W. 23d st., N. Y.
Atlas Bronze & Tuyere Co. (Ltd.), 2829 Smallman st., Pittsburgh, Pa.
Baker, Herman & Co., 101 Duane st., N. Y.
Barrow & Co., 66 Broadway, N. Y.
Bowler & Co., 14 Winter st., Cleveland, O.
Buck & Co., M. M., 209 N. 3d st., St. Louis, Mo.
Cambria Iron Co., 218 S. 4th st., Philadelphia, Pa. **2.**
Child & Co., O. W., 150 B'way, N. Y.
Cleveland Frog & Crossing Works, 14 Winter st., Cleveland, O.
Dayton Malleable Iron Co., Dayton, O.
Delafield, Talmadge, 95 Liberty st., N. Y.
Dwight, E. P., 407 Library st., Phila., Pa.
Excelsior Iron Works Co., Cleveland, O.
Helmbacher Forge & Rolling Mills Co., St. Louis, Mo.
Heyn, Alfred, 47 Broadway, N. Y.
Iron City Tool Works, Penn av. & 32d st., Pittsburgh, Pa.
Jersey City Iron Works, 587 Henderson st., Jersey City, N. J.
Johnston Railroad Frog & Switch Co., 307 Walnut st., Phila., Pa.
Jordan, F., 200 Broadway, N. Y.
Keefer, Horace A., & Co., Kansas City, Mo. **88.**
Logan, James H., Penn Bld., Pittsburgh, Pa. **53.**
Meysenburg, O. W. & Co., Phœnix Bld., Chicago, Ill.
Morden Frog & Crossing Works, 234 S. Clark st., Chicago, Ill.
Phœnix Iron Co., 410 Walnut st., Philadelphia, Pa.
Pollock, Alex., 212 West st., N. Y. **32.**
Post & Co., 165 W. Pearl st., Cincinnati, O.
Plumb, Fayette R., Philadelphia, Pa.
Robinson & Orr, Hamilton Bldg., Pittsburgh, Pa. **72**
St. Louis Bolt & Iron Co., St. Louis, Mo.
Trenton Vice & Tool Works, Trenton, N. J.
Tudor Iron Works, St. Louis, Mo.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Verona Tool Works (Emerson, Paul & Co.), 1 McCance Blk. Pittsburgh, Pa.
Weir Frog Co., Front & Water sts., Cincinnati, O. **47.**
Wharton Railroad & Switch Co., Philadelphia, Pa.
Williamson & Cassedy, 24 S. 4th st., Philadelphia, Pa.

Supplies—Veterinary, Etc.

Arnheim, D., 52 2d av., Pittsburgh, Pa.
Humphreys Homœopathic Medicine Co., 109 Fulton st., N. Y.
Pugh & Russell, Stewart Bld., N. Y.
Roberge, F. P., 1741 Broadway, N. Y.
Somerville, Dr. Wm., & Sons, 127 Erie st., Buffalo, N. Y.
Vacuum Oil Co., Rochester, N. Y.
Williams, Lawrence & Co., Cleveland, O.

Supplies—Water Works.

Michigan Pipe Co., Bay City, Mich.
Union Hydraulic Works, Phila., Pa.

Surfacers.

Murphy & Co., 227 B'way, N. Y. **84.**
Parrott Varnish Co., Bridgeport, Conn.

Switches—R. R.

Allentown Rolling Mills (The), Allentown, Pa.
Ajax Forge Co., Hayne & Blue Island avs., Chicago, Ill.
Elliott Frog & Switch Co., East St. Louis, Ill.
Johnston R. R. Frog & Switch Co., 307 Walnut st., Phila., Pa.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.
Penn Steel Co., Steelton, Pa.
Ramapo Iron Works, Hillburn, N. Y.
Tracy, Dwight, Worcester, Mass.
Union Switch & Signal Co., Swissvale, Pa.
Weir Frog Co., Front and Water sts., Cincinnati, O. **47.**
Wharton, Wm., Jr., & Co., 330 Walnut st, Phila., Pa.

Switching & Signalling Appliances—R. R. Interlocking.

Allentown Rolling Mills, Allentown, Pa.
Johnston Railroad Frog & Switch Co., 307 Walnut st., Phila., Pa.
Kansas City Switch & Frog Co., Kansas City, Mo.
Union Switch & Signal Co. (The), Swissvale, Pa.
Wharton Railroad Switch Co., Phila., Pa.

Switches—Automatic Street R. R.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Baltimore Car Wheel Co. (The), Baltimore, Md.
Craig, Wm. P., 95 Liberty st., N. Y.
Dederick, Z. P., Sherman, Texas.
Dornor & Dutton, 14 Winter st., Cleveland, O.
Fulton Foundry, Cleveland, O.
Greeley (The), E. S., & Co., 5-7 Dey st., N. Y.
Hains Bros., 55 B'way, N. Y.
Hathaway & Robison, 14 Case Bldg., Cleveland, O.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Jersey City Iron Works, Jersey City, N. J.
Johnson Steel Street Rail Co., 712 Mut. Life Bldg., N. Y.; 6 Oliver st., Boston, Mass; Bullitt Bldg., Phila., Pa.; Hamilton Bldg., Pittsburgh, Pa.; Johnson Bldg., Cincinnati, O.; 138 Jackson st., Chicago, Ill.; Bank of Commerce, St. Louis, Mo.; Cotton Ex., New Orleans, La. **55.**
Johnston Rail Road Frog & Switch Co., 307 Walnut st., Phila., Pa.
Kansas City Switch & Frog Co., Kansas City, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Metallic Street Railway Supply Co., Albany, N. Y.
Pennsylvania Steel Co., Phila., Pa. Steelton, Pa. **viii.**
Pugh & Russell Stewart Bldg., N. Y.
Snead & Bibb, Louisville, Ky.
Swen, Jas. M., Denver, Col.
Way Foundry Co. (The), 23d & Wood sts., Phila., Pa.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. & Washington av., Phila., Pa.
White, M. M., & Co., 531 W. 33d st., N. Y.
White, R. I., 12 Pearl st., Boston, Mass.
Whitney Mfg. Co., Cedar Rapids, Iowa.

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Swivels—Iron.

Dickson Mfg. Co., Scranton, Pa.
Moran Bolt & Nut Mfg Co., St. Louis, Mo.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.

Tableware for R. R. Cars and S. S.

Franklin Flint Glass Works, Oxford & Howard sts., Philadelphia, Pa.

Tables—Saw.

Paddock Iron Works, St. Johnsbury, Vt.
Power, L., & Co., 20 S. 23d st., Phila., Pa.
Royle, John & Sons, Railroad av., c. Grand st., Paterson, N. J.

Tacks, Brads and Staples.

Abington Tack & Machine Association, Abington, Mass.
Allen & Gammans, Hyde Park, Mass.
American Tack Co., Fairhaven, Mass.; 116 Chambers st., N. Y.
Anchor Nail & Tack Works (Chess, Cook & Co.), Pittsburgh, Pa.
Anthony & Cushman Tack Co., 24 Court st., Taunton, Mass.
Auburn Tack Co., Auburn, N. Y.
Austin & Soule, Milwaukee, Wis.
Barstow, W. C., Taunton, Mass.
Bay State Tack Co., Sandwich, Mass.
Bicknell, H. T., Weymouth, Mass.
Bishop & Babcock Co. (The), Hamilton, c. Mason st., Cleveland, O.
Blanchard, H., Jr., 94 Union st., Boston, M.
Boston Steel Nail & Tack Works, 158 W. 2d st., Boston, Mass.
Brandow, Barton & Co., 15 N. Pearl st., Albany, N. Y.
Bridgeport Tack Co., Bridgeport, Conn.
Briggs, E. B. & Co., Hanover, Mass.
Bruce, Geo. W., 24 Duane st., N. Y.
Caswell, Converse & Co., Taunton, Mass.
Chess, Cook & Co., 116 Water st., Pittsburgh, Pa.
Chicago Tack Co., 69 S. Water st., Chicago, Ill.
Clark & Dow, Haverhill, Mass.
Cobb & Drew, Plymouth, Mass.
Cordell & Co., 1502 E. Fayette st., Baltimore, Md.
Cooper, J. J., Bridgewater, Mass.
Cross, W. W. & Co., Brockton, Mass.
Currie Bros., 70 W. 7th st., Boston, Mass.
Dawson, Robert M., 2, 4 & 6 Commercial st., Newark, N. J.
Disoway & Henderson, 165 Greenwich st., N. Y.
Double-Pointed Tack Co., 108 Chambers st., N. Y.
Dunbar, Hobart & Whidden, 39 Warren st., N. Y.; S. Abington, Mass.
Edes, Oliver, & Son, Plymouth, Mass.
Elliott & Dobbie, 28 E. Prospect st., Cleveland, Ohio.
Emmons, F. R., & Bro., 21 Warren st., N. Y.
Farrar, F. P., Lynn, Mass.
Fields, A., & Sons, Taunton, Mass.; 88 Chambers st., N. Y.
Florence Tack Co., Northampton, Mass.; Florence, Mass.
Ford & McLaughlin, Kingston, Mass.
Grand Crossing Tack Co., Grand Crossing, Ill.
Harrob, F. M. Plympton, Mass.
Jenkins, D. S., Brockton, Mass.
Judson Mfg. Co., 8 Pine st., San Francisco, Cal.
Keene, S. & Son, East Bridgewater, Mass.
Keith & Trufant, Campello, Mass.
Leeds, Robinson & Co., Raynham, Mass.
Lynn Nail, Tack & Brad Co., Lynn, Mass.
Maryland Tack Co., 1502 E. Fayette st., Balt., Md.
Merritt, C. L., Weymouth, Mass.
Miller & Altherton, Campello, Mass.
Mors, E. & Co., Nat. Bank Bldg., Troy, N. Y.
Nes, H., York, Pa.
Pittsfield Tack Co., Pittsfield, Mass.
Phillips, E. & Sons, Hanover, Mass.; 107 Summer st., Boston, Mass.
Plymouth Tack & Rivet Works, Plymouth, Mass.
Penna. Tack Works, 72 N. 4th st. Phila.; Pa.
Pennsylvania Tack Co., Norristown, Pa.
Reed Bros. Rolling Mill & Tack & Nail Works (D. L. & F. S. Reed), Brockton, Mass.
Rice, J. W., 11 N. Frederick st., Balt., Md.
Ripley & Bartlett, Plymouth, Mass.
Sandwich Tack Co., Sandwich, Mass.
Sargent & Co., Water st., New Haven, Conn.
Shelton Co., Birmingham, Conn.
Simmons & Woodsum, East Braintree, Mass.
Simmons, S. E., Lynn, Mass.
Smiley, W. H., Haverhill, Mass.
Smith Bros., 454-456 Fulton st., Troy, N. Y.
Soule & Co., Kingston, Mass.
Stanley Works, 79 Chambers st., N. Y.; New Britain, Conn.
Stetson, K. W., Kingston, Mass.
Stetson & Talbot, Holliston, Mass.
Stevens & Willis, Braintree, Mass.
Taunton Tack Co., 239 Lake st., Chicago, Ill.; Taunton, Mass.
Thayer & Judd Paraffine Co., New Bedford, Mass.
Trufant, W. E., Whitman, Mass.
Tupper & Potter, 94 Whitehall st., Troy, N. Y.
Union Steel Screw Co., Case av., c. Payne av., Cleveland, O.
Walkley Hardware Co. (The), Plantsville, Conn.
Waterman, L. C. & Sons, Hanover, Mass.
Wiswell, F., 306 Main st., Cincinnati, O.
Worcester Tack & Staple Co., 25 Lincoln st., Worcester, Mass.

Tack Plate.

Bridgewater Iron Co., Bridgewater, Mass.
East Bridgewater Iron Co. (Rogers & Sheldon), 240 Congress st., Boston, Mass.
Globe Nail Co., Station A, Boston, Mass.
Judson Mfg. Co., Oakland, Cal.
Old Colony Iron Co., Taunton, Mass.
Reed Bros. Rolling Mill & Tack & Nail Works (D. L. & F. S. Reed), Brockton, Mass.
Robinson Iron Co., Plymouth, Mass.
Mount Hope Iron Works, Somerset, Mass.
Riverside Iron Works, Wheeling, W. Va.

Tag Manufacturers.

Ætna Tag Mfg. Co., 71 Oliver st., Boston, Mass.
American Pail & Box Co., 21 Rose st., N. Y.
Bardwell, F. C., 115 Worth st., N. Y.
Boston Tag & Printing Co., 150 Pearl st., Boston, Mass.
Bosworth, E. J., 163 N. Water st., Rochester, N. Y.
Cohn, O. J. & Co., 188 W. Houston st., N. Y.
Cunningham, A. C., 338 B'way, N. Y.
Dana, C. H., Lebanon, N. H.
Delussan, P., 15 Howard st., N. Y.
Dennison Mfg. Co., 144 Wabash av., Chicago, Ill.; 26 Franklin st., Boston, Mass.; 404 N. 3d st., St. Louis, Mo.; 198 B'way, N. Y.; 143 Walnut st., Cincinnati, O.
Denny Tag Co., 917 Filbert st., Phila., Pa.
Duplex Tag Co., 403 Washington st., Boston, Mass.
Ehrhardt, A. & Co., 2 Duane st., N. Y.
Eisler, A., 17 Bond st., N. Y.
Fay & Bardwell, 115 Worth st., N. Y.
Franke, O. E., 600 Olive st., St. Louis, Mo.
Green, E., 214 River st., Troy, N. Y.
Hamilton & Lilley, 546 W. 23d st., N. Y.
Hanscom Printing Co. (The), 184 Monroe st., Chicago, Ill.
Hœfer, L., 150 W. 8th st., Cincinnati, O.
Jencks, C. W. & Bro., 287 Broad st., Providence, R. I.

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Johnson, E. A. & Co., 57 Weybosset st., Providence, R. I.
Keller, John, 88-90 Walker st., N. Y.
Kimball, A., 6 Murray st., N. Y.
Lockwood Mfg. Co., 251 S. 3d st., Phila., Pa.
Marston, T. P., 435 7th av., N. Y.
Metcalf, T. O. & Co., 48 Oliver st., Boston, Mass.
Morrell & Little, 108 Pine st., St. Louis, Mo.
New York Tag & Label Mfg. Co., 431 Broome st., N. Y.
Nims, H. B. & Co., 10 Cannon pl., Troy, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Pershing, W. B. & Co., 134 N. Michigan st., South Bend, Ind.
Purdy, J. S., 304 Broadway, N. Y.
Raymond, F. L. & Co., 195 La Salle st., Chicago, Ill.
Sackett Pat. Wired Tag Factory, Garden Prairie, Ill.
Salisbury & Van Wagenen, 159 Duane st., N. Y.
Salisbury Mfg. Co., 11 Washington st., Providence, R. I.
Sandwich Card & Tag Co., Sandwich, Mass.
Scharf Tag & Label Co. (The), 219 Summit st., Toledo, O.
Security Mfg. Co., 43 Milk st., Boston, Mass.
Somes Tag Factory, 5437 N. B'way, St. Louis, Mo.
Steiner, W. B., 431 Broome st., N. Y.
Stevens, H. M., 156 Washington st., Chicago, Ill.
Stowell, H., 5 Cannon pl., Troy, N. Y.
Thompson, T. H., 306 River st., Troy, N. Y.
Thompson, H. G. & Sons, 51 Leonard st., N. Y.
Towne, O. A., Franklin Falls, N. H.
Troy Paper Co., 373 River st. Troy, N. Y.
United Mfg. Co., 21 Mercer st., N. Y.
Young, N. H., 81st st., Troy, N. Y.
Young, Lockwood & Co., 209 Main st., Buffalo, N. Y.
Vibbert, Geo. S. & Co., Clintonville, Conn.
Webster, C. F. & Co., 313 N. Main st., Brockton, Mass.
Weekes, W. T., 35 Nassau st., N. Y.
Wollerman, C. T., 45 Lispenard st., N. Y.

Tanks—Iron.

Atlantic Works, 76 Border st., Boston, Mass.
Ball Bros., 10-32 Porter st., Buffalo, N. Y.
Bartlett, Hayward & Co., Baltimore, Md.
Beardsley, L. C. & Co., Cleveland, O.
Beatty & Kipp, Youngstown, O.
Blakesley & Beach, New Haven, Conn.
Brenneman & Ward, 20 Penn st., Pittsburgh, Pa.
Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Buckeye Bridge & Boiler Works, Cleveland, O.
Carroll & Co., D. W. C. (Ltd.), 310 Liberty st., Pittsburgh, Pa.
Clark, W. J. & Co., Salem, O.
Clark, Winford S., 124 Baxter st., N. Y.
Collins, Wm. & Son, ft. W. 21st st., N. Y.
Coleman, T. R., 3d av. N. and 4th st., Minneapolis, Minn.
Colwell Lead Co., 63 Centre st., N. Y.
Conley, John, Bradford, Pa.
Continental Iron Works, Brooklyn, N. Y.
Craglu Mfg. Co., Chicago, Ill.
Cuddy, James, 43d st. & A. V. R. R., Pittsburgh, Pa.
Davis, R., Oregon st., Milwaukee, Wis.
Desner & Ritchie, ft. Aubin av., Detroit, Mich.
Easterbrook, Wm., 311 Cherry st., Philadelphia, Pa.
East End Boiler Works, ft. Aubin av., Detroit, Mich.
Eclipse Wind Engine Co., Beloit, Wis.
Enterprise Boiler Co., Youngstown, O.
Excelsior Mfg. Co., 106 Market st., Pittsburgh, Pa.
Fairbanks, Morse & Co., Lake & La Salle sts., Chicago, Ill.
Fall River Machine Co., 27 Pond st., Fall River, Mass.
Fox, Geo. & Son, 511 W. 34th st., N. Y.
Gill, Wm. A. & Co., Columbus, O.
Glenn, M. W., 5th av. s., 5th, 1st. & 2d sts., Minneapolis, Minn.
Graver, Wm., 53d & Clark st., Chicago, Ill.
Harrisburgh Car Mfg. Co., Harrisburgh, Pa. **7.**
Hawkins, R. F., Iron Works, Springfield, Mass.
Henderson & Harker Mfg. Co., Columbus, O.
Hendrick Mfg. Co., Carbondale, Pa.
Hodge, E. & Co., Liverpool st., n. Central sq., E. Boston, Mass
Iron City Boiler Works (James Lappan & Co.), Pittsburgh, Pa.
Kuhns, Arthur & Co., 238 E. Lake st., Chicago, Ill.
Lage & Kuessner, c. 6th & Main sts., Cincinnati, O.
Lake Erie Boiler Works, 244 Perry st., Buffalo, N. Y.
Lally & Russell, 1st & C sts., S. Boston, Mass.
Litchfield Car & Machine Co., Litchfield, Ill.
McIlvane, W. & Sons., Reading, Pa.
Mohr, John, & Son, 32 Illinois st., Chicago, Ill.
Munroe, R. & Son, Pittsburgh, Pa.
Neil, Wm. & Co., 46 S. State st., Chicago, Ill.
Noys Mfg. Co., 47 India st., Boston, Mass.
Oil City Boiler Works, Oil City, Pa.
Pancoast & Rogers, 28 Platt st., N. Y.
Perfection Oil Tank Co., 61 W. Water st., Syracuse, N. Y.
Perkins Wind Mill & Ax Co., Mishawaka, Ind.
Pittsburgh Locomotive & Car Works, Pittsburgh, Pa.
Pollock, Wm. B. & Co., Youngstown, O.
Portland Co., Portland, Me.
Rees & Horn, Duquesne Way & 1st st., Pittsburgh, Pa.
Reeves Bros. (Niles Boiler Works), Niles, O.
Rhode Island Locomotive Works, Providence, R. I.
Riter & Conly, 55 Water st., Pittsburgh, Pa.
Sandwich Enterprise Co., Sandwich, Ill.
Sharon Boiler Works, Sharon, Pa.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Shepard, Sidney & Co., Buffalo, N. Y.
Smith, Samuel & Son, Paterson, N. J.
Smith, Theo. & Bro., Jersey City, N. J.
Southerland, Thos. S., & Co., 481 River st., Troy, N. Y.
Southwark Foundry & Machine Co., Washington av. and 5th st., Phila., Pa.
Stacey Mfg., Co., Cincinnati, O.
Star Steam Heater Co., Market and Main sts., Mt. Joy, Pa.; 77 Maiden la., N. Y. **57.**
Sullivan & Ehlers, 172 B'way, Albany, N. Y.
Taylor, Wm. R., 1st and N. 4th sts., B'klyn, N. Y.
Tudor Boiler Mfg. Co., 244 E. Pearl st., Cincinnati, O.
Van Antwerp, S., 170 Grape st., Syracuse, N. Y.
Wandelt, Samuel, 67 N. 3d st., B'klyn, N. Y.
Wangler, Joseph F., 1021 N. Main st., St. Louis, Mo.
Warden, Henry, Germantown Junction, Phila., Pa.
Webb, Alfred & Co., Chattanooga, Tenn.
Western Iron Works Co., St. Louis, Mo.
Whittier Machine Co., Granite, c. 1st st., S. Boston, Mass.
Wilson, F. C. & Co., 239-241 Lake st., Chicago, Ill.
Winfield Mfg. Co., Warren, O.
Zier, M. & Co., New Albany, Ind.

Tanks, Vats and Cisterns (Wood).

Anderson, V. D., & Sons, 59 Courtland st., Cleveland, O.
Baker, S. & Son, Lowell, Mass.
Bartlett, J. H., Worcester, Mass.
Blair, B. R., Bradford, Pa.
Blatchley & Farrell, Goodell, Pa.
Bodwell, H. H., 211 Mission st., San Francisco, Cal.
Borger Bros. & Co., Columbus, O.
Borman, J., 53 Gasquet st., New Orleans, La.

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Bradshaw, H., 209 W. Lake st., Chicago, Ill.
Brennan & Colligan, 20 Burling sl N. Y.
Broderick & Rodgers, 213 Delord st., New Orleans, La.
Buchert, P., 67 E. Front st., Cincinnati, O.
Bullock, J. C., & Co., Duke Centre, Pa.
Burkhardt's, Geo. J., Sons, 223 Chestnut st., Phila., Pa.
Campbell, William, & Co., 356 Main st., Cambridgeport, Mass.
Carroll, D. W. C., Liberty st., c. 3d av., Pittsburgh, Pa.
Cherck, C., Oshkosh, Wis.
Collins, William, & Sons, ft. W. 21st st., N. Y.
Corcoran, Andrew J., 76 John st., N. Y.
Cowley & Edwards, Custer City, Pa.
Crooker & Watson, Bradford, Pa.
Cuddy, J., 43, c. A. & R. R. st., Pittsburgh, Pa.
Degionni, C., 422 N. Claiborne st., New Orleans, La.
Dougherty & Morrison, Duquesne Way, Pittsburgh, Pa.
Douglass, W. & Sons, 23 Carson st., Pittsb'gh, Pa.
Fay, G. H., & Co., 614 Batterie st., San Francisco, Cal.
Flynn, J. W., Duke Centre, Pa.
Fulda Bros., 30 Spear st., San Francisco, Cal.
Grappendorf, C. G., 175 7th st., New Orleans, La.
Graver, W. C., R. I. & P. Ry., bet. 53d & 54th sts., Chicago, Ill.
Greiner, J. & Bro., 900 E. Green st., Louisville, Ky.
Grimm, I., 13 McMicken av., Cincinnati, O.
Guth, G. W., 93 Elysian Fields, New Orleans, La.
Gunther, F. J., 469 Burgundy st., New Orleans, La.
Hall, Amos H., 1143 N. Front st., Phila., Pa.
Hawkins, R. F., Iron Works, 20) Liberty st., Springfield, Mass.
Hazleton Bros. & Wheeler, Bradford, Pa.
Headen & McAuley, 112 Indiana st., Chicago, Ill
Helmick, J. G., 259 Custom House st., New Orleans, La.
Hilke, A., Oshkosh, Wis.
Hill, H. & Co., Joliet, Ill.
Hill & Wright, 129 to 167 Sumner st., Boston, Mass.
Hussey, J., 265 Canal st., New Orleans, La.
Jewell, A. M & Co., Berry, n. 3d st., San Francisco, Cal.
Kavanaugh, J., Fond du Lac, Wis.
Kennen Sheet Iron Works, 103 E. Front st., Cincinnati, O.
Killilea, M., Tuft's Whf., E. Boston, Mass.
Kinney & Co., Kendall Creek, Pa.
Koonce, W. C., Bradford, Pa.
Krogh, F. W., & Co., 51 Beale st., San Francisco, Cal.
Lake Erie Boiler Works, 244 Perry st., Buffalo, N. Y.
Lappan, James & Co., 20th st., r. Penn av., Pittsburgh, Pa.
Landquist, C. J., 14 Milwaukee av., Chicago, Ill.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Luther, M., Jr, Carondelet, c. 4th st., New Orleans, La.
Lengemors, J. K., Duke Centre, Pa.
Lewis, J., & Co., Bradford, Pa.
McNeil, J., & Bro., 29th, c. Railroad st., Pittsburgh, Pa.
Marshall, Sage & Co., Duke Centre, Pa.
Mitchell, R. B., 183 Magazine st., New Orleans, La.
Morphy, J. H., Annunciation st., c. Napoleon av., New Orleans, La.
Murray, P. A., Carondelet, c. St. Joseph st., New Orleans, La.
Nussbaum, W., 380 Bayou rd., New Orleans, La.
Nutter, Kimball & Co., 418 Fore st., Portland, Me.
Peraldo, J., 207 N. Claiborne st., New Orleans, La.
Perkins Wind Mill & Ax Co., Mishawaka, Ind.
Pettingell, W. J, Lowell, Mass.
Plumbly & Gould, 58 Washington st., Buffalo, N. Y.; Bradford, Pa.
Pocock, J. H., 113 Franklin av., St. Louis, Mo.
Pujol, A., 160 Frenchman st., New Orleans, La.
Ransome, E. L., 402 Montgomery st., San Francisco, Cal.
Rees & Thorn, 1st st., c. Duquesne way, Pittsburgh, Pa.
Rheam, S. B. & Co., Smallman, c. 31st st., Pittsburgh, Pa.
Ries Bros., Milwaukee, Wis.
Rigamer, J., 210 Ursulines st., New Orleans, La.
Riggs, A. & Bros., 247 Delord st., New Orleans, La.
Riter & Conley, 55 Water st., Pittsburgh, Pa.
Roberts, T. W., Bradford, Pa.
Rogers, H., Bradford, Pa.
Roling, J., 131 E. Front st., Cincinnati, O.
Roth, G., Akron, O.
Rouyer, A. P., 300 N. Rampart st., New Orleans, La.
Rouyer, L., Marigny, c. Villere st., New Orleans, La.
Russell, H. S. & Co., Pittsfield, Mass.
Russell, J. & Sons, W. 1st, c. C st., S. Boston, Mass.
Scherk, W, B., Appleton, Wis
Schomaker, H., 848 St. Charles av., New Orleans, La.
Schmultz & Delmaye, Kendall Creek, Pa.
Scioto Boiler Works, Columbus, O.
Seither, C., 151 Phillip st., New Orleans, La.
Seither, M., Jackson, c. Annunciation st., New Orleans, La.
Simmons, D. G., 29 Trinity pl, N. Y.
Smith, J. C., 179 13th st., Buffalo, N. Y.
Smith, J. M. & Sons, 1423 Spring Garden st., Phila., Pa.
Smith, Samuel & Son., Paterson, N. J.
Soudain, J., 270 Dumaine st., New Orleans, La.
Speir, J. & Son, 18 Fletcher st., N. Y.
Stacey Mfg. Co., 33-39 Mill st., Cincinnati, O.
Steele, C. H., Oshkosh, Wis.
Stucke, H. C., 19 Carondelet Walk, New Orleans, La.
Wallis Iron Works, 19 Morris st., Jersey City, N. J.
Wanamaker, E., Bradford, Pa.
Wandelt, Samuel, 59-67 N. 2d st., B'klyn, N. Y.
Waters, A. A., Green Island, N. Y.
Weir, W., 1224 N. Main st., Louisville, Ky.
Wells, Russell & Co., Mission, c. Fremont st., San Francisco, Cal.
Wendnagle, L. & Son, Clark, c. 16th st., Chicago, Ill.
Werner, T., Dunkirk, N. Y.
Wheeler, L. H. & Co., 68 Pearl st., Boston, Mass.
Wignall, Haskins & Co., Braidwood, Ill
Wilkens, Henry, 447 West st., N. Y.
Woerner, D., Main, c. Harrison st., San Francisco, Cal.
Woolford, Geo., 1611 N. 6th st., Phila., Pa.
Woodin & Little, 509-511 Market st., San Francisco, Cal.
Worcester Boiler Works, Worcester, Mass.
Zussin, W. P., 308 Mission st., San Francisco, Cal.
Zier, M. & Co., Water, bet. State & Lower 1st st., New Albany, Ind.
Zschech, E., Akron, O.

***Taps.**

Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**

Taps—Hand.

Billings & Spencer Co. (The), Hartford, Conn.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
King, J. M. & Co., Waterford, N. Y.

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***Taps—Pulley.**

Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**

***Taps—Staybolt.**

Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**

Taps and Dies.

Bair & Gazzam (Ltd.), 86 3d av. & 91 2d av., Pittsburgh, Pa.
Butterfield & Co, Derby Lane, Vt.
Card, S. W. & Co., Mansfield, Mass.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
Elterich, Charles, 191-193 Worth st., N. Y.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Pratt & Whitney Co., Hartford, Conn.
Smith, S. A., 39 S. Canal st., Chicago, Ill.
Standard Tool Co., Bond, c. Rockwell st., Cleveland, O. **49.**
Wells Bros. & Co., Greenfield, Mass.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Worswick Mfg. Co., Cleveland, O.

Tar—Coal.

Balt. Coal Tar & Mfg. Co., Baltimore, Md.
Childs, Wm. H. H., 73 Maiden la., N. Y.
N. Y. Coal Tar Chemical Co., 10 Warren st., N. Y.
St. Louis Coal Tar Co., St. Louis, Mo.

Telegraph Construction.

Sawyer, C. H. & R. W., 7 R. R. Blk., Bangor, Me.
Skeele, T. H., 45 Broadway, N. Y.

Telegraph Instruments and Supplies.

Am. Electrical Works, 15 Cortlandt st., N. Y.; 67 Stewart st., Providence, R. I.
Am. Insulator Co, 7 Beekman st., N. Y.; 26 Equitable Bldg., Boston, Mass.
Anderson, Homer, Peekskill; N. Y.
Averell Insulating Conduit Co., 44 Broadway, N. Y.
Baldwin, James Co. (The), Manchester, N. H.
Ballards, E. V. & Co., 53 Broadway, N. Y.
Bishop Gutta Percha Co., 420-426 E. 25th st., N. Y.
Brower, H. C. & Son, 79 E. Genesee st., Syracuse, N. Y.
Brownlee & Co., Holden av. & R. R. crossing, Detroit, Mich.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Burns, C. P., 84 La Salle st., Chicago, Ill.
Butler, J. C. & Co., Sandusky, O.
California Electrical Works, 25 Market st., San Francisco, Cal.
Central N. Y. Telephone & Telegraph Co., 78 Wieting Blk., Syracuse, N. Y.
Cincinnati Railway Supply Co., 53 W. 2d st., Cincinnati, O.
Culin, F. A., 59 S. 4th st., Phila., Pa.
Davis, W. E., 571 3d st., Jersey City, N. J.
Day, A. G., 16 Dey st, N. Y.
Detroit Electrical Works, Detroit, Mich.
Electric Supply Co. (The), 17 Dey st., N. Y.; 3 S. Warren st., Syracuse, N. Y.; 171 Randolph st., Chicago, Ill.; 328 Bush st., San Francisco, Cal.; Ansonia, Conn.
Empire City Electro Co., 779 Broadway, N. Y.
Fix, Wm., 170 Fulton st., N. Y.
Frasse, P. A. & Co., 92 Park Row, N. Y.
Gilliland, R. J., Adrian, Mich.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Harbert, Edw. E. & Co., 159 La Salle st., Chicago, Ill.
Howe, John, 408 Bleecker st., N. Y.
Howlett & Co., Irvington, N. J.
Hotchkiss, C. B., 16 Dey st., N. Y.
Hungerford, L. & P., 17 Dey st., N. Y.
India Rubber Comb Co. (The), 9-13 Mercer st., N. Y.
India Rubber & Gutta-Percha Insulating Co., 537 W. 24th st., N. Y.
Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**
Ketcham, J. M., 1524 3d av., N. Y.
Klein, J. M. & Co., 722 Montgomery st., San Francisco, Cal.
Knox, E. L., 50 Broad st., N. Y.
Kyle, S. & Co., 56-58 Dey st., N. Y.
Lyman, A. B., 36 S. Water st., Cleveland, O.
Malcolm, W., 20 S. Salina st., Syracuse, N. Y.
McGonegal & Lake, 25 Elwood Bldg., Rochester, N. Y.
McGown, L., 47 Phelan Bldg., San Francisco, Cal.
MacReady, R. A., 111 Pearl st., N. Y.
Merchants' Mfg. & Construction Co, 54 Broad st., N. Y.
Midland Electric Co., 1213 Harney st., Omaha, Neb.
Montgomery & Co., 105 Fulton st., N. Y.
Moore Bros., 108 Liberty st., N. Y.
Partrick & Carter, 114 S. 2d st., Phila., Pa. **69.**
Pearce & Jones, 79 John st., N. Y.
Plumb, C., 89 Erie st., Buffalo, N. Y.
Pope, W. R. & Co., 206 E. Baltimore st., Balt., Md.
Raynor, H. M., 25 Bond st., N. Y.
Redding Electrical Co., 30 Hanover st., Boston, Mass.
Ripley, D. & Sons, Commercial st., Newark, N. J.
Ross, Hugh, Galeton, Pa.
Russell, A. L., 109-115 Court st., Boston, Mass.
Sommer's, John, Son, 8-12 Pearl st., Newark, N. J.
Southern Electric Co., 201 North st., Balt., Md.
Standard Electric Works, Cincinnati, O.
Standard Electric Co., 502 4th av., Louisville, Ky.
Standard Electrical Works, Pearl, c. Elm st., Cincinnati, O.
Standard Under-Ground Cable Co., Penn Bldg., Pittsb'gh, O.; 18 Cortlandt st., N. Y.
Syracuse Electrical & Mfg. Co., 30 S. Salina st., Syracuse, N. Y.
Syracuse District Messenger Co., 30 S. Salina st., Syracuse, N. Y.
Telegraph Specialties Mfg. Co., 111 Pearl st., N. Y.
Underground Electric Lines Conduit Co., 141 B'way, N. Y.
U. S. Electrical Co., 42 Wall st., N. Y.
Western Electric Co., 251 S. Clinton st., Chicago, Ill.; 70 Trinity pl, N. Y.
Wirsching, Aloys, 28 Centre st., N. Y.

Telegraph—Keys & Sounders.

Anderson, Homer, Peekskill, N. Y.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Empire Electric Mfg. Co., 27 Walworth st., Brooklyn, N. Y.
Greeley, E. S., & Co., 5 Dey st., N. Y.
Jenkins, M. R., Browning, Mo.
Jones, C. E., & Bro., Cincinnati, O. **78.**
Lyman, A. B., 36 S. Water st., Cleveland, O.
Morgan, B. L., & Co., Louisville, Ky.
New Haven Clock Co., 16 Park pl., N. Y.
Partrick & Carter, 114 S. 2d st., Phila., Pa. **69**
Ross, Hugh, Galeton, Pa.
Standard Electric Co., 502 4th av., Louisville, Ky.
Standard Electrical Works, Cincinnati, O.
Thompson & Adams, Olean, N. Y.

***Telegraph Message Safety Hooks.**

Greeley, E. S., & Co., 5 Dey st., N. Y.

Telegraph Pins and Brackets.

American Pin Co., Waterbury, Conn.
Brownlee & Co., Detroit, Mich.

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Butler, Jay C., & Co., 49 Water st., Sandusky, Ohio.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Detroit Electrical Works, Detroit, Mich.
Electrical Supply Co., 171 Randolph st., Chicago, Ill.
Gilleland, Robert J., Adrian, Mich.
Greeley, E. S., & Co., 5 Dey st., N. Y.
Sommer's, John, Son, 8-12 Pearl st., Newark, N. J.
Standard Electrical Works, Cincinnati, O.

Telegraph Vises and Pliers.

Bunnell, E. H., 113 Liberty st., N. Y.
Frasse & Co., 62 Chatham st., N. Y.
Greeley, E. S., & Co., 5 Dey st., N. Y.

Telegraph Writing Machines.

Writing Telegraph Co., 57 Murray st., N. Y.

Telephone Companies, Instruments and Supplies.

Air Acoustic, 39 B'way, N. Y.
Air Acoustic Telephone Co., 777 Broad st., Newark, N. J.
Am. Acoustic Telephone Co., 43 Milk st., Boston, Mass.
American Bell Telephone Co., 95 Milk st., Boston, Mass.
American Cushman Telephone Co., 242 S. Water st., Chicago, Ill.
Am. National Telephone Co., 26 Broadway, N. Y.
American Private Line Telephone Co., Grand Rapids, Mich.
Am. Speaking Telephone Co., 195 B'way, N. Y.
Amsterdam Telephone Co., Amsterdam, N. Y.
Am. Telephone & Telegraph Co., 18 Cortlandt st., N. Y.
Averell Insulating, Conduit & Telephone Co., 1420 N. Y. av., Washington, D. C.
Bacheller, Bert O., Battle Creek, Mich.
Bay State Telephone Co., Worcester, Mass.
Bell Telephone Co. (The), 400 Chestnut st., Phila., Pa.; 4th, c. Walnut st., Cincinnati, O.; 422 Pine st., St. Louis, Mo.; Cambridge, Mass.
Bennett Telephone Co. (The), Indianapolis, Ind.
Bowen, W. J., Norwalk, O.
Brattleboro Tel. Exchange, Brattleboro, Vt.
Buffalo Telephone Co., Buffalo, N. Y.
Burlington Telephone Exchange, Burlington, Iowa.
B. & N. Telegraph Co., Springfield, Vt.
Central Acoustic Telephone Co., 777 Broad st., Newark, N. J.
Central District & Printing Telegraph Co., 5th, c. Wood st., Pittsburgh, Pa.
Central Telephone Co., Monmouth, Ill.
Central Union Telephone Co., Jacksonville, Ill.; 505 Pullman Bldg., Chicago, Ill.; Peoria, Ill.; Davenport, Ia.; Des Moines, Ia.; Dubuque, Ia.
Chesapeake & Potomac Telephone Co., 231 E. Baltimore st., Baltimore, Md.; 1420 N. Y. av., Washington, D. C.
Citizens' Telephone Co., 90 4th av., Pittsburgh, Pa.
Colorado Telephone Co., Denver, Col.
Commercial Telephone Co., Cohoes, N. Y.
Compania Electrica de Cuba, 195 B'way, N. Y.
Commercial Telephone Co., 14 Museum Bldg., Rochester, N. Y.; 41 Museum Bldg., River, c Fulton st., Troy, N. Y.
Consolidated Telephone Co., 1 Montgomery st., Jersey City, N. J.
Continental Telephone Co., 95 Milk st., Boston, Mass.
Chicago Telephone Co., 503 Pullman Bldg., Chicago, Ill.
Delaware & Atlantic Telegraph & Telephone Co., 40 Chestnut st., Phila., Pa.
Detroit Electrical Works, Detroit, Mich.
Dolbear Telephone Co., 70 Washington st., Boston, Mass.
Drawbaugh Telephone Syndicate, 2 Wall st., N. Y.
Ellsworth, T. G., 39 Nassau st., N. Y.
Elgin Telephone Co., Elgin, Ill.
Empire City Electrical Co., 15 Dey st., N. Y.
Empire State Telephone & Telegraph Co., 43 New st., N. Y.
E. Tennessee Telephone Co., 195 B'way, N. Y.
Eureka Telephone Co., 31 Milk st., Boston, M.
Gray National Telephone Co., 189 La Salle st., Chicago, Ill.
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Griffin, H. C., Franklin Falls, N. H.
Hampden Telephone Co., Holyoke, Mass.
Harbert, Edw. E. & Co., 159 La Salle st., Chicago, Ill.
Hawkeye Telephone Co., Independence, Ia.
Holcomb's Mechanical Telephone, 85 Grand st., Pittsburgh, Pa.
Holcomb, J. R., & Co., 28 Atwater Bldg., Cleveland, O.
Hudson River Telephone Co., 16 Cortlandt st., N. Y.; 68 Washington av., Albany, N. Y.
Independent Telephone Co., 6 S. Merrick st., Phila., Pa.
Inter-Continental Telephone Co., 95 Milk st., Boston, Mass.
International Bell Telephone Co., 32 Nassau st., N. Y.
Iowa & Minnesota Telephone Co., Dubuque, Ia.
Iowa Union Telephone & Telegraph Co, Davenport, Iowa; Red Oak, Iowa.
Knudson & Ellsworth, 39 Nassau st., N. Y.
Law Telephone Co., 112 Liberty st., N. Y.
Leadville Telephone Co., Leadville, Col.
Long Distance Telephone Co., 53 B'way, N. Y.
Long Island Acoustic Telephone Co., 219 Montague st., Brooklyn, N. Y.
Long Telephone & Telegraph Co., 1331 F st., Washington, D. C.
Lord Acoustic Telephone Mfg. Co., 7 Exchange pl., Boston, Mass.
Martin, C. A. & Co., Norwood, N. Y.
Maryland Overland Telephone & Telegraph Co., 213 W. German st., Baltimore, Md.
Metropolitan Telephone & Telegraph Co., 18 Cortlandt st., N. Y.
Mexican Telephone Co., 53 Devonshire st., Boston, Mass.
Michigan Telephone Co., 24 Newberry st. and McMillen Bldg., Detroit, Mich.
Midland Electric Co., 1213 Harney st., Omaha, Neb.
Missouri Pan Electric Telephone Co., 602 N. 4th st., St. Louis, Mo.
Molecular Telephone Co., 60 New st., N. Y.
Mt. Pleasant Telephone Exchange, Mt. Pleasant, Ia.
National Bell Telephone Co., Portland, Me.
Narragansett Pier Telephone Exchange, Narragansett Pier, R. I.
N. E. Telephone & Telegraph Co., 50 Pearl st., Boston, Mass.
N. H. District Messenger Co., 346 State st., New Haven, Conn.
N. Y. & N. England Telephone Co., 17 B'way, N. Y.
N. Y. & N. J. Telephone Co., 784 Broad st., Newark, N. J.; 397 Fulton st., Brooklyn, N. Y.; 259 Washington st., Jersey City, N. J.
New York & Pa. Telephone Co., 16 Cortlandt st., N. Y.
Newport & Derby Tel. Co., Newport, Vt.
Newport & Suburban Telephone Exchange, Newport, R. I.
Norton, Wm. L., Buffalo, N. Y.
Northwestern Overland Telephone & Telegraph Co., 243 Adams st., Chicago, Ill.
Novelty Machine Works, Wellsville, O.
Ohio Valley Telephone Co., 412 W. Jefferson st., Louisville, Ky.
Pacific Bell Telephone Co., San Francisco, Cal.
Parsons, Shaw & Daniels, Chatham Center, O.
Partrick & Carter, 114 S. 21st., Phila., Pa. 69.
Pawtucket Tel. Ex., Pawtucket, R. I.

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e ople's Telephone Co., 39 B'way, N. Y.; 1404 S. Penn sq., Philadelphia, Pa.
Penn Overland Telephone & Telegraph Co. (The), 406 Library st., Phila., Pa.
Pettingell, F. E. & Co., 167 Congress st., Boston, Mass.
Pierce, J. R., Oswego, N. Y.
Police Telephone & Signal Co., 118 La Salle st., Chicago, Ill.
Providence Telephone Co., 24 Butler Exchange, Providence, R. I.
Ravenswood Telephone Exchange, 410 Opera House Bldg., Chicago, Ill.
R. I. Telephone & Electric Co., 54 Westminster st., Providence, R. I.
Rochester Telephone Exchange, 73 E. Main st., Rochester, N. Y.
Royce & Marean, 1408 Penn av., Washington, D. C.,
St. Joseph Telephone Exchange Co., St. Joseph, Mo.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Sommers, John Son, 8-12 Pearl st., Newark, N. J.
Southern Bell Telephone Co., 195 B'way, N. Y.
Southern N. E. Telephone Co., 95 Orange st., New Haven, Conn.
Southwestern Overland Telephone & Telegraph Co., 15 C. J. Bldg.; Louisville, Ky.
Standard Acoustic Telephone Co., Potter Bl'g., N. Y.
Standard Electrical Works, Pearl, c. Elm st., Cincinnati, O.
Suburban Telephone Co., Canton, Mass.
Sullivan & Bains, Zanesville, O.
Telephone Exchange, Paris, Ill.
Tropical American Telephone Co., 95 Milk st., Boston, Mass.
Washington Telephone Co., Charles, c. Fayette st., Baltimore, Md.
Wallace Electric Telephone Mfg. Co., 150 Broadway, N. Y.
Western Electric Co., 227-251 S. Clinton st., Chicago, Ill.; 70 Trinity pl., N. Y
Westchester Telephone Co., 16 Cortlandt st., N. Y.
Western Mass. Telephone Co., Northampton, Mass.
Western Telephone Co., Indianapolis, Ind.
Williams, Chas., Jr., 115 Court st., Boston, Mass.
Woonsocket Telephone Exch., Woonsocket, R. I.

Telescopes.

Allen, R. L., Providence, R. I.
Bausch & Lomb Optical Co., 535 to 539 N. St. Paul st., Rochester, N. Y.
Byrne, John, 314 E. 21st st., N. Y.
Clark, A., & Sons, Cambridgeport, Mass.
Eaton, A. K., 65 Henry st., Brooklyn, N. Y.
Goodman & Wall, Buffalo, N. Y.
Malcom, Wm., Syracuse, N. Y.
Meyer, Curt W., 357 Fourth av., N. Y.
Warner & Swasey, Cleveland, O.

Tension Carriages.

Lane & Bodley Co. (The), Water st., Cincinnati, O.
Poole & Hunt, Baltimore, Md.

*Terminals—Iron.

Van Dow Iron Works, 102 Euclid av., Cleveland, O.

Terra Cotta.

Calumet Fire Clay Co., 57 Kilby st., Boston, Mass.
Conkling, H. J., 144 to 152 E. Pearl st., Cincinnati, O.
Lewis, H. A., 384 1st st., S. Boston, Mass.
Portland Cement Pipe & Stone Co., Portland, Me.

Testers—Boiler.

Rue Mfg Co, 116 N. 9th st., Phila., Pa.

Testing Machines.

Hunt & Clapp, 95 Fifth av., Pittsburgh, Pa. **72.**
McCoy & Sanders, 26 Warren st., N. Y.
Olsen & Co., 500 N. 12th st., Phila., Pa.
Riehle Bros., 50 S. 4th st., Phila., Pa.
Russell, A. L., 109-115 Court st., Boston, Mass.

Tickets—R. R.

Bell Punch Co. (The), (Ltd.) 24 Tabernacle st., Finsbury sq., E. C., London, Eng.
Foster, C. A., Mercers' Row, Northampton, Eng.
Franklin Bank Note Co., 142 B'way, N. Y. **1.**
Jones Stationery & Printing Co. (J. M. W.), Dearborn & Monroe sts, Chicago, Ill.
Martin, Rufus & Co., 114 Nassau st., N.Y. **52.**
Poole Bros., 308 Dearborn st., Chicago, Ill.
Smith, A. & Co., 172 Fulton st., N. Y.
Whiting, T. J., 7 South pl., Finsbury sq., E. C., London, Eng.

Tie Plates—R. R.

Dunham Mfg. Co., 131 Devonshire st., Boston, Mass. **25.**
Johnson Steel Street Rail Co. (The), Johnstown, Pa. **55.**

Tie Preserving Apparatus.

Chicago Tie Preserving Co., 15th & Clark sts., Chicago, Ill.
Lehigh Valley Creosoting Works (The), Perth Amboy, N. J.

Tie Rods.

Johnson Steel Street Rail Co. (The), Johnstown, Pa. **55.**

Tie Truss for R'y Joints.

Scott, Stephen G., Kalamazoo, Mich.

Ties—Creosoted R. R.

Carolina Oil & Creosote Co., Wilmington, Del.
Lehigh Valley Creosoting Co., Perth Amboy, N. J.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**

Ties for Street R. R.—Metallic.

Johnson Steel Street Rail Co., 712 Mut. Life Bldg., N. Y.; 6 Oliver st., Boston, Mass.; Bullitt Bldg., Phila., Pa.; Hamilton Bldg., Pittsburgh, Pa.; Johnson Bldg., Cincinnati, O.; 138 Jackson st, Chicago, Ill.; Bank of Commerce, St Louis, Mo.; Cotton Ex., New Orleans, La. **55.**
Splane, J., Phila., Pa.
Taylor, Enoch L., 682 Brooklyn st., West Phila., Pa.

Ties—Wood.

Ayer, Ed. E., 234 S. Water st., Chicago, Ill.
Barker, Cyrus A., 236 S. Water st. (Room 7), Chicago, Ill.
BEAUMONT LUMBER CO., BEAUMONT, TEXAS.
Brownlee & Co., Detroit, Mich.
Chatterton, J. B., E. S. Upper Bridge st., Minneapolis, Minn. **54.**
Chicago Cedar Post Co., Ashland av., n. 22d st., Chicago, Ill.
Clark, Fielden & Co., 3 blks. W. of Depot (Oak Park), Chicago, Ill.
Danner, A. C., Mobile, Ala. **69.**
De Camp & Willson, 88 Cortlandt st., N. Y.
Delafield Tallmadge, 95 Liberty st., N. Y.
Doyle Bros. 94 Griswold st., Detroit, Mich,

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Eppinger & Russell, 6th st. & Gowanus Canal, Brooklyn, N. Y.; 160 Water st., N. Y.
Ferguson & Co., Montgomery City, Mo.
Feter, E., Terhune, Ind.
Glenwood Mfg. Co., Glenwood, Wis.
Goodenow & Hinds, 240 S. Water st., Chicago, Ill.
Hitchcock & Foster, 232 S. Water st. (Room 3), Chicago, Ill.
Horn, Wm. H., 238 S. Water st., Chicago, Ill.
Jackson Lumber Co., Lockport, N. Y. **21.**
Johnson, Jacob, 236 S. Water st. (Room 7), Chicago, Ill.
Johnstown Lumber Co., 363 Bedford st., Johnstown, Pa.
Kaw Valley Lumber Co, 9th st. & B'way, Kansas City, Mo. **16.**
Laycock Lumber Co, Buffalo, N. Y.
Leaton & Upton, Mt. Pleasant, Mich.
Millener, Joel H., 220 Main st., Buffalo, N. Y.
Millward & Co., 80 West st, N. Y.
Moss, T. J., Bank of Commerce Bldg., St. Louis, Mo. **58.**
Mueller, Christy & Raber, 236 S. Water st., Chicago, Ill.
Nona Mills Co., Nona, Tex.
Rathbun Co. (The), Deseronto, Ont.
Ripley, Wm., & Son, 238 S. Water st., Chicago, Ill.
Stone, B. B., Lumber Co., Com'l Nat. Bank Bldg., Chicago, Ill.
Vanderbilt & Hopkins, 120 Liberty, N. Y. **65.**
Whitcomb, R. S., Cedar Co., Robey, n. Blue Island av., Chicago, Ill.

Timber—Bridge.

Atlanta Lumber Co., Atlanta, Ga.
BEAUMONT LUMBER CO., BEAUMONT, TEXAS.
Chase, James S., 242 S. Water st. (Room 6), Chicago, Ill.
Danner, A. C., Mobile, Ala. **69.**
De Camp & Wilson, 88 Cortlandt st., N. Y.
Decha Lumber & Planting Co., 60 Congress st., Boston, Mass.
Dunbar, M. P., Co. (The), 18 Broadway, N. Y.
Fitzsimons & Connell, 18 N. Clark st., Chicago, Ill.
Hamilton, T. H., Toledo, O.
Jackson Lumber Co., Lockport, N. Y. **21.**
Kaw Valley Lumber Co., 9th st. & B'way, Kansas City, Mo. **16.**
Laycock Lumber Co., Buffalo, N. Y.
Lutcher & Moore, Orange, Texas. **51.**
Mann Bros., 8 Wabash av., Chicago, Ill.
Marsh & Bingham Co., 2 S. Market st. (Room 2), Chicago, Ill.
Millener, Joel H., 220 Main st., Buffalo, N. Y.
Mitchell & Rowland Lumber Co. (The), Toledo, O.
Moss, T. J., Bank of Commerce Bldg., St. Louis, Mo. **58.**
Neill & Platt, Minneapolis, Minn.
Nona Mills Co., Nona, Texas.
Piedmont Lumber Co., 40 Marietta st., Atlanta, Ga.
R. B. Stone Lumber Co., 56 Commercial National Bank Bldg., Chicago, Ill.
Rice Lake Lumber Co., Rice Lake, Wis.
Stoner & McClure, Pittsburgh, Pa.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**
Von Utassy, A. W., ft. Delaware av., Phila., Pa.
Woods, Jenks & Co., 5 Carter st., Cleveland, O. **47.**

Timber—Creosoted.

Eppinger & Russell Creosoting Works (The), 160 Water st., N. Y.
Lehigh Valley Creosoting Works (The), Perth Amboy, N. J.

Timber—Railroad.

De Camp & Wilson, 88 Cortlandt st., N. Y.
Jackson Lumber Co., Lockport, N. Y. **21.**
Kaw Valley Lumber Co., 9th st. and Broadway, Kansas City, Mo. **16.**
Millward & Co., 80 West st., N. Y.
Smith & Co, W. H. H., Toledo, Ohio.
Vanderbilt & Hopkins, 120 Liberty st., N. Y. **65.**

Timber—Ship.

Jackson Lumber Co., Lockport, N. Y. **21.**
Von Utassy, A. W., ft. Delaware av., Phila., Pa.
Smith & Co., W. H. H., Toledo, O.

Timber—Wholesale.

Alger, Smith & Co., 3 Telegraph Blk., Detroit, Mich.
Atlanta Lumber Co., Atlanta, Ga.
Bacon & Pike, 126 Front st., N. Y.
Barrett & Co., Geo., Camden, N. J.
Berwick, C. & Co., Hazlehurst, Ga.
Blackshear Bros. & Miller, Brewton, Ala.
Brister, B. E. & Co., Bogue Chitto, Miss.
Brookhaven Lumber & Mfg. Co., Brookhaven, Miss.
Buckle, Chas. L. & Co., ft. W. 13th st., N. Y.
Bushnell, A., Kansas City, Mo.
Carman, Chas. B., 44 Broadway, N. Y.
Case & Co., 200 Broadway, N. Y.
Crane & Clark, 30th st., n. R., N. Y.
Crosby, C. P., La Crosse, Wis.
Dodge, Arthur M., Jersey City, N. J.
Dunbar, M. P. Co., 18 Broadway, N. Y.
East Saginaw & Averill Lumber Co., East Saginaw, Mich.
Ferguson, H. C., Stillwater, Minn.
Goodyear, D. A. & C. A., Tomah, Wis.
Hieronymus Bros., Theodore, Ala.
Hilton Timber & Lumber Co., 81 New st., N. Y.
Jackson Lumber Co., Lockport, N. Y. **21.**
Kaw Valley Lumber Co., 9th st. and B'way, Kansas City, Mo. **16.**
Keystone Lumber Co., Bogue Chitto, Miss.
Moore, H. C., Fort Scott, Kas.
Moore & Hendrix, 160 Fulton st., N. Y.
Murray, Alfred J., 16 Beaver st., N. Y.
N. Y. Hardwood Lumber Co., 200 B'way, N. Y.
Norwood & Butterfield Co., 385 Illinois st., Chicago, Ill.
Pinner, Moritz, 71 B'way, N. Y.
Russell, John W., 200 B'way, N. Y.
Ryan, Leon I., Atlanta, Ga.
Southmayd, Frederick A., 189 Washington st., N. Y.
Strickland, F. P., & Co., Kansas City, Mo. **23.**
Walling, E. P., 72 Wall st., N. Y.
Wells & Van Schaick Co., 165 Randolph st., Chicago, Ill.
White, Chas. W., 533 E. 18th st., N. Y.
White, J. J., McComb City, Miss.
Willson, Adams & Co., ft. E. 42d st., N. Y.
Youmans, T. J., & Co., Hazlehurst, Ga.

Tin—Bar and Pig.

American Metal Co., 80 Wall st., N. Y.
Blatchford, E. W., & Co., Chicago, Ill.
Bruce & Cook, 188 Water st. and 248 Pearl st., N. Y.
Brooklyn Smelting & Refining Works, Driggs st., bt. Union av. and Lorimer st., B'klyn, E. D., N. Y.
Coddington, T. B., & Co., 27 Cliff st., N. Y.
Colwell Lead Co., 63 Centre st., N. Y.
Davol, John & Sons, 100 John st., N. Y.
Flaring, Wm. S., 100 Chambers st., N. Y.
Jersey City Smelting Works, 109 Plymouth st., Jersey City, N. J.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Pope, Theo. J., & Bro., 292 Pearl st., N. Y.
Thomson, A. A., & Co., 213 Water st., N. Y.
Williams, E. A., & Son, 109 Plymouth st., Jersey City, N. J. **x.**

Tin—Plate and Sheet.

Boston Lead Mfg. Co., c. Congress & Franklin sts., Boston, Mass.

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Bruce & Cook, 186-190 Water st., N. Y.
Coddington, T. B. & Co., 27 Cliff st., N. Y.
Colwell Lead Co., 63 Centre st, N. Y.
Congdon, Carpenter & Co., 81 Canal st., Providence, R. I.
Dickerson, Van Dusen & Co., 29 Cliff st., N. Y.
Horton, Gilmore, McWilliams & Co, 172-176 Hoyt Metal Co., St. Louis, Mo.
Lake st., Chicago, Ill.
Lawson, F. H. & Co., 188-190 Main st., Cincinnati, O.
Lyman, W. C., 49 Michigan st., Chicago, Ill
McCullum, Morrell & Mullen, Donaldsonville, La.
Mesker & Bro., 421-425 S. 6th st., St. Louis, Mo.
Naylor & Co., 99 John st., N. Y.
Parsons, John, 104-106 John st., N. Y.
Phelps, Dodge & Co., 11-13 Cliff st., N. Y.
Pope, T. J. & Bro., 292 Pearl st., N. Y.
Schmidt, F. & Sons, Milwaukee, Wis.
Scott, James B. & Co., 122-124 2d av., Pittsburgh, Pa.
Shepard, Sidney & Co., 23-25 Randolph st., Chicago, Ill.
Stroud & Co. 104 John st., N. Y.
Taylor, N. & G. Co., Phila., Pa.
Tin Plate Decorating Co. (The), 110 John st., N. Y.
Trotter, Nathan & Co., 36 N. Front st., Phila., Pa.
U. S. Iron & Tin Plate Co. (Ltd.), Demmler P. O., n. McKeesport, Pa.
Van Noorden, E. & Co., 387 Harrison av., Boston, Mass.
Wheeler, E. S. & Co, 54 Cliff st., N. Y.

Tires—Apparatus for Setting or Removing.

Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**

Tire Benders.

Wiley & Russell Mfg. Co., Greenfield, Mass.

Tires—Locomotive and Car Wheel.

Birmingham Rolling Mill Co., Birmingham, Ala.
Calumet Iron & Steel Co., Chicago, Ill.
Cambridge Rolling Mill, Cambridgeport, Mass.
Chicago Steel Works, 806 Noble st., Chicago, Ill.
Chicago Tyre & Spring Works, 94 Washington st., Chicago, Ill.
Cleveland Rolling Mill Co., Cleveland, O.
Eckstein, C. G., & Co., 32 Liberty st., N. Y.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Gantler Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Hogan, John L., & Co., 216 S. 4th st., Phila., Pa.
Jacobus, E. Y., Potter Bldg., N. Y.
Jones, B. M., & Co., 13 Oliver st., Boston, Mass.
Knoxville Car Wheel Co., Knoxville, Pa.
Krupp, Fried., Essen, Germany.
Prosser, Thos., & Son, 15 Gold st., N. Y.
Midvale Steel Co., 333 Walnut st., Phila., Pa.
Mowry Car Wheel Works, 27½ W. 3d st., Cincinnati, O.
Nashua Iron & Steel Co., 67 Liberty st., N. Y.; Nashua, N. H. **56.**
Offutt & Co., c. Church and Rector sts., N. Y.
Prosser, Thos., & Son, 15 Gold st., N. Y.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Singer, Nimick & Co. (Ltd.), Pittsburgh, Pa. **3.**
Standard Steel Works, 220 S. 4th st., Phila., Pa.
Taylor Iron Works, Highbridge, N. J.
Warren, Andrews, 707 N. 2d st., St Louis, Mo.
Washburn Car Wheel Co., Hartford, Conn.

Tires, Springs, Etc. Second Hand.

Logan, James H., Penn Bldg, Pittsburgh, Pa. **53.**

Toe Calks.

Burk, P. F., 360 Dorchester av., South Boston, Mass.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Dewick, C. & Co., 360 Dorchester av., S. Boston, Mass.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Pugh & Russell, Stewart Bldg., N. Y.
R. I. Horse Shoe Co., 31 Exchange pl., Providence, R. I.

Tongs—Machinists.

Barnes Tool Co., 958 Grand av., New Haven, Conn.
Hoggson & Pettis Mfg. Co. (The), 64-68 Court st., New Haven, Conn.

Tools—Boring.

Perry Quinn & Co., Rockford, Ill.
Snell Mfg. Co., Fiskdale, Mass.
Thompson & Nathanson Boring Tool Co., Rockford, Ill.

Tools—Calkers.'

Billings & Spencer Co. (The), Hartford, Conn.
Dickson Mfg. Co., Scranton, Pa.

Tools—Contractors.

Dooley, N. C., 540 W. 46th st., N. Y.
Kimbark, S. D., Chicago, Ill.
McBain, T. A., 640 W. 38th st., N. Y.
Meads, I. V., Tool Works, 370 Avenue A, N. Y.

Tools—Carpenters.'

Abbott, P. J. & Son, Dexter, Me.
Brattleboro Tool Co., Brattleboro, Vt.
Goodnow & Wrightman, 176 Washington st., Boston, Mass.
Higganum Hardware Co., Higganum, Conn.
Kracuter & Co., c. 17th & 18th avs., Newark, N. J.
La Rose Mfg. Co., Hamilton, c. Rose st., Albany, N. Y.
Reed, A. O., Higganum, Conn.

Tools—Diamond.

Diamond Emery Wheel & Machine Co., Providence, R. I.
Emerson, Smith & Co. (Ltd.), Beaver Falls, Pa.
Tanite Co. (The), Stroudsburg, Pa.
Union Stone Co., 38 Hawley st., Boston, Mass.

Tools—Drilling.

Emery, L., Jr., & Co., 41-45 Main st., Bradford, Pa.
Herbertson, J. & Sons, Brownsville, Pa.
Ireland & Hughes, Petrolia, Pa.
Oil Well Supply Co. (Ltd.), Oil City, Pa.
Phillips, David, Bradford, Pa.
Robertson, Wm. & Son, Bradford, Pa.

Tools—Edge.

The Acme Sheer Co., 275 Barnum st., Bridgeport, Conn.
Adams, J. Q., Spruce Creek, Pa.
Albertson Mfg Co., Poughkeepsie, N. Y.
Aldrich, E., Bath, Maine.
Althouse, Isaac, 191 S. Meridian st., Indianapolis, Ind.
American Knife Co., Thomaston, Conn.
Ames Bros., Richmond, Me.
Arlington Edge Tool Co., East Arlington, Vt.
Arnold, G. W. & Son, Ionia, Mich.
Arnold & Waterbury, 91 Lewis st., N. Y.
Asire, J. M. & Son, South Bend, Ind.
Baker, M., Hampden, Me.
Bangor Edge Tool Co., Bangor, Me.
Bare, Martin, Hamilton, O.

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Barnard, Son & Co., Waterbury, Conn.
Barnett, Thos. R., 1726 N. 4th st., Phila., Pa.
Beardsley Scythe Co., West Winsted, Conn.
Beck, G. W., & Son, New Albany, Ind.
Belknap, Amos, St. Johnsbury, Vt.
Belknap, J., St. Johnsbury, Vt.
Benjamin, J. S., Dayton, O.
Bennett, F. A., & Co., Brookfield, Conn.
Billings, J. P., Clinton, Me.
Black, Henry B., Chester, Pa.
Bolton, E. G., 460 Fore st., Portland, Me.
Boothby, D. S., Livermore, Me.
Bowen, H. D., Weston, Mass.
Bradley, G. W., Westport, Conn.
Brady & Son, Lancaster, Pa.
Bremen, G., Penn Yan, N. Y.
Bridgeport Knife Co., E. Washington av., Bridgeport, Conn.
Brooks Edge Tool Co., New Haven, Vt.
Brooks, G. A., Alstead, N. H.
Brooks, George A., Alstead, N. H.
Brooks & Atwood, Brooksville, Vt.
Brown, J. D., Northwood, N. H.
Buck Bros., Millbury, Mass.
Buck C. A., Millbury, Mass.
Bundy, A. L., Foxboro, Mass.
Burkinshaw's, A., Sons, Peperell, Mass.
Buzzell, T. H., Wellington, Me.
Carnes & Muzzey, Sunapee, N. H.
Carpenter, E. F., & Co., Jamestown, N. Y.
Carter, E., 22 Spring st., Troy, N. Y.
Carter, Israel M., Hyde Park, N. Y.
Carter & Co., Scranton, Pa.
Chandler, W., Henniker, N. H.
Charlton, John, Newark, N. J.
Clayton Bros., Bristol, Conn.
Clegg, D. S. & Son, 380 Freeman av., Cincinnati, O.
Coes, Loring & Co., Worcester, Mass.
Coburn, F. W. & Son, New Durham, N. H.
Colelesser Bros., Eldorado, Pa.
Cohoes Axe Mfg. Co., Cohoes, N. Y.
Collins Co. (The), 289 Main st., Hartford, Conn.; Collinsville, Conn.; 212 Water st., N. Y.
Collins & Morsé, Montville, Me.
Connecticut Valley M'f'g Co., Essex, Conn.
Crossman, A. W., & Son, Warren, Mass.
Cushman, H. R., Andover, Me.
Davis, E., Fitchburgh, Mass.
Davis, W., 1011 Psy'k av., Phila., Pa.
Dean, H. N., New Bedford, Mass.
Deering, Jonathan R., Saco, Me.
De Groot, R., Nassau Works, Newark, N. J.
De Hart, C. A., 72 Adams st., Newark, N. J.
Detroit Edge Tool Works, Mt. Elliott av., c. Wright st., Detroit, Mich.
Dewitt, Morrison & Kelly, 11 N. 22d st., Phila., Pa.
Dickinson, C. D., Hadley, Mass.
Doble, B. W., Lagrange, Me.; Milo, Me.
Dolbier, O. C., Kingfield, Me.
Doscher, M., 85 Chambers st., N. Y.
Douglass Axe Mfg. Co., 274 Purchase st., Boston, Mass.
Douglass Axe Co., Douglass, Mass.
Dowe, R. J., Beloit, Wis.
Dunn Edge Tool Co., Fayette, Me.
Dunn Edge Tool Co., Oakland, Me.
Duntley, J. H., Rochester, N. H.
Dutton, John, Chester, Pa.
Eagle Scythe Co., Barkhamsted, Conn.
Edleman, Jacob, Gallatinville, N. Y.
Emerson Edge Tool Co., East Lebanon, N. H.
Emerson & Stevens Mfg. Co., Oakland, Me.
Emery, Waterhouse & Co., Monmouth, Me.
Empire Edge Tool Works, Cohoes, N. Y.
Empire Knife Co., West Winsted, Conn.
Evans, W. B., Campton, N. H.
Fieslein, J., 913 Caroline st., Baltimore, Md.
Fisher, D. B., Reading, Pa.
Foster Bros., Fulton, N. Y.
Foster Edge Tool Co., Gardiner, Me.
Foster, L., Machias, Me.
Francis Axe Co., 430 Niagara st., Buffalo, N. Y.
French, F., Warren, Me.
Gillet & Co., Elmira, N. Y.
Ginaud, D., 43 Wall st., Bridgeport, Conn.
Gladwin, R. S., Meriden, Conn.
Gleason & Allen, Plymouth, Conn.
Goodell Co., Antrim, N. H.
Goodell, D. H., Bennington, N. H.
Gregg, M. & Son, Rochester, N. Y.
Green, J. M., Milesburgh, Pa.
Haff, S. P., 45 Pennington st., Newark, N. J.
Hammond, C. & Son, 12 N. 5th st., Philadelphia, Pa.
Hankey, A. & Co., Leicester, Mass.
Harding, J., 20 Arch st., Newark, N. J.
Hatch, Geo. W., Biddeford, Me.
Hawkins, Wm. S., 135 Lewis st., N. Y.
Hiscock File Mfg. Co., Chelmsford, Mass.
Hoer & Morgan, 20 12th st., Cincinnati, O.
Holley Mfg. Co., Salisbury, Conn.
Hopkins, H. C. & Co., Foster, R. I.
Horne, J. H. & Sons, Lawrence, Mass.
Horton, C. A., ft. River st., Rochester, N. Y.
Hosse, A. F., 11 S. Market st., Nashville, Tenn.
Howe Bros. & Hurlbut, West Winsted, Conn.
Howland & Yeaton, Royalton, Vt.
Hoyt, H. F., Eaton Rapids, Mich.
Hubbard & Blake Mfg. Co., Oakland, Me.
Hubbard & Co., 91 5th av., Pittsburgh, Pa.
Hubbard & Co., Beaver Falls, Pa.
Hudgins, John R., Pratt, c. Mill st., Baltimore, Md.
Hulbert, E. S. & Co., Bernardston, Mass.
Hunter, D. G., Camden, Me.
Hunter, W. A., 461 4th st., San Francisco, Cal.
Hurd, A. A., Northwood, N. H.
Hurd, W., Liberty, Me.
Hyde Mfg. Co., Southbridge, Mass.
Industrial Tool Works, Georgia, c. Efner st., Buffalo, N. Y.
Ives, W. A. & Co., Hamden, Conn.
Jamestown Axe Works, Jamestown, N. Y.
Jennings & Griffing Mfg Co., Hinsdale, N. H.
Johnsonville Axe Works, Johnsonville, N. Y.
Jones, A. W., Peabody, Mass.
Jungblut, J., Milwaukee, Wis.
Kelley, J. Cherryfield, Me.
Kelley, B. & Co., Belfast, Me.
Kellogg, Martin, 411 W. Washington st., Indianapolis, Ind.
Kimball, C. J. & Son, Bennington, N. H.
Kinnel, P., Columbus, O.
Knickerbocker, H., Ballston Spa, N. Y.
Kranthelm, Richard, 55 11th av., Newark, N. J.
Krasselt, E., 101 Ash st., Buffalo, N. Y.
La Belle Cutlery Works, 175 Cannon st., Bridgeport, Conn.
Lane & Gale, Troy, N. Y.
Leavitt, C. F., Lewiston, Me.
Lockwood, L. B., Gardner, Mass.
Loveland Axe Co., Lamar, Pa.
Lowentrant, Peter, 276 Halsey st., Newark, N. J.
McCurdy, A., Gloucester, Mass.
McDonald, W., Sherman, Me.
Mack & Co., 218 Mill st., Rochester, N. Y.
Mallett, J. L., Rockland, Me.
Mallison, J., W. Cornwell, Conn.
Mann, G. H., Waterville, Vt.
Mann, J. F., Bellefonte, Pa.
Mann, J. F., & Co., Axemann, Pa.
Mann, J. H., Reedsville, Pa.
Mann, Wm., Jr., & Co., Lewistown, Pa.
Mansfield, E., & Co., 84 Exchange st., Bangor, Me.; Orono, Me.
Mascoma Edge Tool Co., Lebanon, N. H.
Merritt, C. H., S. Scituate, Mass.
Middlesex Mfg. Co., Middletown, Conn.
Miller, G. W., 8 Uhler al., Baltimore, Md.
Miller, Z., Littleton, Me.
Mockridge & Son., 97 Market st., Newark, N. J.
Moody, J. A., Medfield, Mass.
Moore, C. H., Toledo, O.
Morgan & Marston, Farmington, N. H.
Morris, C. R., Newfield, Me.
Munson, E. A., Grand Rapids, Mich.
Nash, Harmon, Lowell, Mich.
Neville, G. D., New Boston, N. H.
New England Novelty Works, Hill, N. H.
New Hampshire Scythe Co., Littleton, N. H.

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New London Scythe Co., New London, N. H.
Nichols, Wesley D., Haverhill, Mass.
Noethlick, C., Muscatine, Ia.
Nolin, G. & M., Skowhegan, Me.
Norfolk Shear Co., Norfolk, Conn.
Nutting, L. M., & Co., Concord, N. H.
Ohio Tool Co., Columbus, O.
Pacific Knife Co., State, c. Main st., Bridgeport, Conn.
Paris Edge Tool Co., Paris, Ill.
Pearey, C. A. & J. H., Bangor, Me.
Peaslee, Jno. T., Alna, Me.
Peck, A. G., & Co., Cohoes, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Perry, B. C., Island Falls, Me.
Phillips, Francis H., Baltimore, Md.
Phillips & Shuffleton, Sunderland, Vt.
Pillsbury, M. M., 85 John st., N. Y.; Napanock, N. Y.
Plumb, Fayette R., 1620 N. Broad st., Phila., Pa.
Porter, Charles, Winchester, Mass.
Porter, H. S., Fairlee, Vt.
Powell Tool Co., 31 Elm st., Cleveland, O.
Preble, C. H., & Co., Sullivan, Me.
Price, Matthias, 338 Mulberry st., Newark, N. J.
Provost, M. B., Hedenberg Works, Newark, N. J.
Purmont, M. V., & Co., Lebanon, N. H.
Reeds, W., Windsor, Mass.
Reliance Edge Tool Co., Indianapolis, Ind.
Renneburg, Edward, Baltimore, Md.
Rexford, O. S., Highgate, Vt.
Richards, R., Clarksville, N. H.
Roney, J. Byron, Lynn, Mass.
Rosser Bros., Mill Hall, Pa.
Roth, S., 93 E. 8th st., Cincinnati, O.
Rupp & Co., Evansville, Ind.
Ryder, T. M., Woodstock, Vt.
Ryerson, S. C. & Co., Kemble, N. Hampden st., Boston, Mass.
Schaal, G. A., & Co., 621 2d st., Baltimore, Md.
Schroeder, A., 720 Vine st., Cincinnati, O.
Schultz, A., Kansas City, Mo.
Schureman & Hager, 8 Commercial st., Newark, N. J.
Schureman, H. B., 8 Commercial st., Newark, N. J.
Sherman & Co, Belfast, Me.
Shertz, John, Lancaster, Pa.
Sibley Scythe Co., Newport, N. H.
Simonds, A. A., Dayton, O.
Smith, J. C., Evansville, Ind.
Smith, J. G., Evansville, Ind.
Smith, J. O., 627 Dover st., Baltimore, Md.
Snell & Atherton, Brockton, Mass.
Sprague & Boyden, Waterbury, Conn.
Stanley Rule & Level Co., 110 Elm st., New Britain, Conn.
Star Tool Co., 228 E. Lake st., Chicago, Ill.
Strickland, A., Brighton, Me.
Swan, J., Seymour, Conn.
Taylor Bros. & Co., Fulton, N. Y.
Ten Eyck Edge Tool Co., Cattaraugus, N. Y.
Thayer Scythe Co, West Winsted, Conn.
Thompson, Benjamin C., Dexter, Me.
Thompson & Nathanson, Milwaukee, Wis.
Todd, A. S., Rock Falls, Ill
Trafton, Geo. A., 118 Market st., Portsmouth, N. H.
Trask Bros., Little Falls, N. Y.
Tuck Mfg. Co., Brockton, Mass.
Underhill Bros., 71 Haverhill st., Boston, Mass.
Underhill Edge Tool Co., Nashua, N. H.
Union Shear Co., West Cornwell, Conn.
Voos, E., 54 Court st., New Haven, Conn.
Webb & Nason, Bangor, Me.
Webster & Wilbur, East Jaffrey, N. H.
Webster, W., Jaffray, N. H.
Weed & Becker Mfg. Co. (The), 11 Gold st., N. Y.; Cohoes, N. Y.
Welch, H. B., Wheelock, Vt.
Weld, M., Greenbush, Me.
Wells, C. & Sons, 325 Mill st., Rochester, N. Y.
White, Gilbert & Co., Honesdale, Pa.
White, G., & Co., St. Petersburgh, Pa.
White, L. & I. J., 312 Exchange st., Buffalo, N. Y.
Whorff, B., & Co., Skowhegan, Me.
Williams Bros., Mfg. Co., Glastonbury, Conn.
Williams, C. A., & Co., Skowhegan, Me.
Williams, W. P., Huntington, Mass.
Willott, Jas., & Sons, Manitowoc, Wis.
Wilson, Bradford, Acton, Me.
Winsted Mfg. Co., West Winsted, Conn.
Witham, G. S., Carratunk, Me.
Worden Tool Co., 91 Leonard st., Cleveland, O.
Yerkes & Plumb, P. R. R., ab. Orthodox st., Fkd., Phila., Pa.
Zeigler, L. & Co., ft. River st., Rochester, N. Y.

Tools—Graining.

Callow, J. J., 53 Beech st., Cleveland, O. **53.**
Energy Mfg. Co., 1123 S. 15th st., Phila., Pa. **57.**
Pratt & Candee, 8 Ford st., Hartford, Conn.
Tanite Co. (The), Stroudsburg, Pa.

Tools—Manufacturers.

Adams, A. L., Cedar Rapids, Iowa.
Adams, Rothwell & Co., St. Paul, Minn.
Ajax Mfg. Co., 285 Penn av., Allegheny, Pa.
Aldridge, W., 2507 Coral st., Phila., Pa.
Alford & Berkele Co., 77 Chambers st., N. Y.
Allison, J. D., Cromwell, Conn.
Am. Bit Brace Co., Buffalo, N. Y.
Am. Standard Gauge & Tool Works, Wilmington, Del.
Am. Tool & Machine Co., 84 Kingston st., Boston, Mass.
Am. Mechanical Improvement Co., 145 Broadway, N. Y.
Am. Pneumatic Tool Co., 138 E. 42d st., N. Y.
Am. Tool Co., 116 Chambers st., N. Y.; 44 S. Water st., Cleveland, O.
Amidon & White, 135 Main st., Buffalo, N. Y.
Anderson, P. J. & Co., 614 Filbert st, Philadelphia, Pa.
Anderson, W. H. & Son, 38 Clinton av., Detroit, Mich.
Armstrong Mfg. Co., Bridgeport, Conn.
Ashtabula Tool Co., Ashtabula, O.
Asper, Benj. F., 125 5th av., Pittsburgh, Pa.
Athol Mfg. Co., Athol, Mass.
Atkins, E. C., & Co, Indianapolis, Ind.
Auburn Tool Co., Auburn, N. Y.
Barsons, J. D., 901 N. Main st., St. Louis, Mo.
Beck, G. W., & Son, New Albany, Ind.
Beck, W. P., Barker, c. S. 22d st., Phila., Pa.
Beecher, F. A., Seymour, Conn.
Bell, J. S., 23d n. Chestnut st., Phila., Pa.
Bell, Thos. J., & Co., B'way, c. 2d st., Cincinnati, O.
Belz, J. C., 168 Milwaukee av., Chicago, Ill.
Bemis & Call, Hardware & Tool Co., 14 Taylor st., Springfield, Mass.
Bennett, W. C., 83 Fort E. st., Detroit, Mich.
Billings & Spence Co. (The), 216 Lawrence st., Hartford, Conn.
Binghamton Hoe & Tool Co., Binghamton, N. Y.
Blevney, John C., 59-63 7th av., Newark, N. J.
Blittersdorf, C. H., 213 N. 4th st., Phila., Pa.
Bolles, L., Hoe & Tool Co., Binghamton, N. Y.
Booth & Son, 833 Ellsworth st., Phila., Pa.
Born, R., 99 W. Randolph st., Chicago, Ill.
Boston Blower Co., 276 Franklin st., Boston, Mass.
Bower, Wm., 53 Fulton st., N. Y.
Brady, W., & Sons, Lancaster, Pa.
Bramberg, Chas., 91 Cliff st., N. Y.
Brandt, F. C., 55 Elder st., Cincinnati, O.
Brattleboro Tool Co. (The), 80 Chambers st., N. Y.; Brattleboro, Vt.
Brombacher, A. F., & Co., 31 Fulton st., N. Y.
Brower Hay Tool Co., Crawfordsville, Ind.
Brown, E. T., & Co., Grand Rapids, Mich.
Brown, J. H., 139 3d av., B'klyn, N. Y.
Brown, R. H., & Co., Ashmun st., New Haven, Conn.
Brutsche, Frederick, 4 Walker st., N. Y.
Bryant, A., & Son, Lawrence, Mass.
Buchan, A., Wythe av., c. Howard st., B'klyn, N. Y.

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Buchan, J., 640 W. 38th st., N. Y.
Bucher & Leicht, Tiffin, O.
Buck, M. M., & Co., 209 N. 3d st., St. Louis, Mo.
Buck Bros., Millbury, Mass.
Buffalo Hammer Co., 1541-1561 Niagara st., Buffalo, N. Y.
Bullock, O. W., Springfield, Mass.
Burk Drill Co., 37 West st., Cleveland, O.
Callender & Patterson, Dayton, O.
Callow, J. J., 53 Beech st., Cleveland, O. 53.
Capital City Machine Works, Columbus, O.
Capital City Tool Co., Des Moines, Ia.
Carleton & Wallace, Oldtown, Me.
Carney, H., Hammer Factory, Little Falls, N.Y.
Charlton, J., Nassau Works, Newark, N. J.
Chester, O. A., 77½ Dorrance st., Providence, R. I.
Chester Mfg. Co., Chester, Conn.
Cincinnati Tool Co., 126 W. 2d st., Cincinnati, Ohio.
Clark Bros., Belmont, N. Y.
Cluthe, G., 17 W. 8th st., Cincinnati, O.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. 24.
Cobb, W. B., 279 W. River st., Cleveland, O.
Coes, L., & Co., Worcester, Mass.
Collins Co. (The), Canton, Conn.
Collins & Co., 212 Water st., N. Y.
Colton, A. J., 338 N. 4th st., Phila., Pa.
Connecticut Valley Mfg. Co., Centre Brook, Conn.
Cooke, J. C., 1340 Passyunk av., Phila., Pa.
Corcoran, Daniel J., 406 E. 49th st., N. Y.
Conlan, B., & Co., 45 Lawrence st., Newark, N. J.
Crossley, C., 1411 Barclay st., Phila., Pa.
Crowell, A., & Co., 161 Eddy st., Providence, R. I.
Cumming, G., & Co., 18 Fell st., San Francisco, Cal.
Cunningham, Edw., 60 Centre st., N. Y.
Currier Bros., Chesterfield Factory, N. H.
Darr, H., 42 Spear st., San Francisco, Cal.
Davis Level & Tool Co., Springfield, Mass.
Davis, W., 214 Quarry st., Phila., Pa.
Detroit Mechanical Works, 211 Jefferson av., Detroit, Mich.
Detroit Steel & Spring Works, Michigan and Indian avs., Detroit, Mich.
De Witt, Morrison & Kelly, 11 N. 22d st., Phila., Pa.
Diamond Wrench Co., 222 Newbury st., Portland, Me.
Doble, A., 13 Fremont st., San Francisco, Cal.
Dodge & Lyons, Montclair R. R., Newark, N. J.
Dodt, B. C., 532 Central av., Cincinnati, O.
Donegan & Swift, 174 Fulton st., N. Y.
Dooley, Nicholas C., 536 W. 46th st., N. Y.
Dopp, H. W., 462 Elliott st., Buffalo, N. Y.
Dorrance & Torrance, Steubenville, O.
Doscher, Martin, 88 Chambers st., N. Y.
Douglas Axe Mfg. Co., 274 Purchase st., Boston, Mass.
Duntley, J. H., Rochester, N. H.
Dussler, A. J., Hendenberg Works, Newark, N. J.
Dyson, J., 399 Hoadly st., Cleveland, O.
Ebert, G. C., 92 Ohio st., Cleveland, O.
Ebert, Lucien, 246 Thompson st., N. Y.
Eclipse Plane Co., Coshocton, O.
Ellis, G. D., & Son, 309 Race st., Phila., Pa.
Ellrich Hardware Mfg. Co., Plantsville, Conn.
Elmwood Tool Co., 140 Harrison st., Providence, R.
Enterprise Mfg. Co., Geneva, O.
Excelsior Mfg. Co., Birmingham, Conn.
Eyre, Henry, 471 E. Houston st., N. Y.
Fallows, A. G., 241 Arch st., Phila., Pa.
Farmer Rolling Mill Co., Grand Rapids, Mich.
Fiala, L., 1449 Forrest st., Cleveland, O.
Fieslein, J., 912 S. Caroline st., Baltimore, Md.
Fletcher, John R., 307 W. 37th st., N. Y.
Forester, H., Hedenberg Works, Newark, N.J.
Forbes & Curtis, Bridgeport, Conn.
Fox, John, r. 305 W. 21st st., N. Y.
Frasse, Peter A., & Co., 95 Fulton st., N. Y.
Frasse & Co., 92 Park Row, N. Y.
Fulton Iron & Engine Works, Detroit, Mich.
Fulton Tool & Mfg. Co., Canal st., Fulton, O.
Furbish & Hamlen, Augusta, Me.
Gage Tool Co., Vineland, N. J.
Gallagher, Alex., 30th st., c. Walnut, Phila., Pa.
Garritt & Bosch, Seymour, Conn.
Gates & Jetter Mfg. Co., 861 Jefferson av., Buffalo, N. Y.
Germantown Tool Works, 412 Commerce st., Phila., Pa.
Geneva Tool Co., Geneva, O.
Gesswein, F. W., 39 John st., N. Y.
Gilbert, F. W., 6 Reade st., N. Y.
Gillespie, Benjamin, 728 3d av., N. Y.
Gluescher & Co., Main, c. Franklin sts., Cincinnati, O.
Gleason & Allen, Plymouth, Conn.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Goodwin & Burr, 4th & Porter sts., Detroit, Mich.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Gribble, J., 100 E. 89th st., N. Y.
Griffin, Thos., 294 9th av., N. Y.
Greenfield Tool Co., Greenfield, Mass.
Hall, J. G., Mfg. Co., Roxbury, Vt.
Harrow, J. W., 208 Bleecker st., N. Y.
Hart Mfg. Co., 117 Public sq., Cleveland, O.
Hartz, H. V., 2123 Champlain st., Cleveland, O.
Harvey, H. H., Augusta, Me.
Hartford Tool Co. (The), 262 Main st., Hartford, Conn.
Hauck, Jacob, 312 W. 41st st., N. Y.
Hawkins, Wm. S., r. 135 Lewis st., N. Y.
Heald, A., Son, Milford, N. H.
Healey, Ellen, 60 Centre st., N. Y.
Heathcote, Thos., 308 Penna. av., Pittsburgh, Pa.
Heisser's, Jacob Son, 511 8th av., N. Y.
Hering, H., 141 Hester st., N. Y.
Higganum Hardware Co., Higganum, Conn.
Hill, T., 48 R. R. av., Jersey City, N. J.
Hinsdale Machine & Tool Co., Hinsdale, N. H.
Hoage, J. H., & Co., Chicopee, Mass.
Hofer, F., Cambridge, Mass.
Hoggson & Pettis Mfg. Co., 64 Court st., New Haven, Conn.
Holmes, E., 82 Eda st., Chicago, Ill.
Holmes, J., 44 Mechanic st., Newark, N. J.
Holt Mfg. Co., 65 Central way, Cleveland, O.; Springfield, Mass.
Horn, W. H. & Bro., 451 N. 3d st., Phila., Pa.
Hotchkiss, Guy C., Field & Co., 624 E. 14th st, N. Y.
Houghton, J., Manchester, N. H.
Hubbard & McClary, Windsor, Vt.
Hudgins, J. R., & Co., 701 E. Pratt st., Baltimore, Md
Humphreysville Mfg. Co., Seymour, Conn.
Huppert, C., 443 5th av., Chicago, Ill.
Illinois Pneumatic Tool Co., 175 Dearborn st., Chicago, Ill.
Ingram, A., 1502 N. 5th st., Phila., Pa.
Interchangeable Tool Co., Plymouth, c. Bridge st., B'klyn, N. Y.
Iron City Tool Works (Ltd.), 32d & Smallman sts., Pittsburgh, Pa.
Ironton Hoe & Tool Co., Ironton, O.
Ives, W. A., & Co., New Haven, Conn.
Jencks, J. H., E. Main st., Waterbury, Conn.
Jelinek, A., 335 S. Canal st., Chicago, Ill.
Jennings, C. E., & Co., 97 Chambers st., N. Y.
Jennings & Griffin Mfg. Co., Hinsdale, N. H.
Johnson Bros., 5th, c. Central av., Cincinnati, Ohio.
Johnson, E., 120 S. Clinton st., Chicago, Ill.
Johnson, W. (Hedenberg Works), Newark, N. J.
Jordan, Chas., 48 Centre st., N. Y.
Jordan & Gottfried, 208 Canal st., N. Y
Juergens, A., 11 W. Canal st., Cincinnati, O.
Jungblut, J., Milwaukee, Wis.
Kankey, A. & Co., 2321 Vine st., Phila., Pa.
Kavanagh, J., 37 N. Portland av., B'klyn, N. Y.
Keene, G. C., & Co., 148-150 E. Front st., Cincinnati, O.

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Kellett, W. F., 304 Dearborn st., Chicago, Ill.
Kelly, M., 204 Mission st., San Francisco, Cal.
Kerr, W., 235 Westminster st., Providence, R. I.
Keystone Tool Works, 901 N. Main st., St. Louis, Mo.
Kindermann, Schroeder & Co., 106 Canal st., Cleveland, O.
King, J. M., & Co., Waterford, N. Y.
King's, J., Sons, 818 5th st., N. Y.
Kinnel, P., Columbus, O.
Kirmss, R., 162 Stanton st., N. Y.
Klein, Logan & Co, bd. S. 13th st., Pittsburgh, Pa.
Klooz, G., 25 Leonard st., Cleveland, O.
Koberlein, Frederick, 508 W. 24th st., N. Y.
Koester, C. F., 41 Maiden la., N. Y.
Kotzum, A., 100 Centre st., N. Y.
Kraeuter & Co., 17th, c. 18th avs., Newark, N. J.
Krajewski, F, & Co., 516 5th st., San Francisco, Cal.
Krasselt, W., 101 Ash st, Buffalo, N. Y.
Krauthelm, R. J., 477 Washington st., Newark, N. J.
Kuhling, H. A. G., 549 5th st., San Francisco, Cal.
Kuder, A., 75 Nassau st., N. Y.
Kurtz, F. P., 97 Cliff st., N. Y.
Lake City Tool Co., Madison, Wis.
Langhorst Bros., Main, c. Abigail st., Cincinnati, O.
Langenau Mfg. Co., 156 Merwin st., Cleveland, O.
Lauer & Baumann, 98 Randolph st., Detroit, Mich.
Law, F., 842 Broadway, Cleveland, O.
Lawton, M. W., 6 Lafayette st., Providence, R. I.
Lederer, L., 199 Commerce st., Newark, N. J.
Lees, J. W., 7th, c. Abbott st., Detroit, Mich.
Lehigh Mfg. Co., Bethlehem, Pa.
Leister Mfg. Co., Erving, Mass.
Leland & Tiffany, Dayton, O.
Lemoine, Camille, 66 W. Houston st., N. Y.
Lemoine Mfg. Co., 16 High st., B'klyn, N. Y.
Lesson, C., 19 Greene st., Newark, N. J.
Leetonia Tool Co., Leetonia, O.
Little, Chas. E., 59 Fulton st., N. Y.
Lohbauer & Hasler, 62 13th st, Cincinnati, O.
Lohr, J. H., 9th c. Main st., Cincinnati, O.
Long & Alstatter Co. (The), 96 Lake st., Chicago, Ill.
Lovegrove & Co., 143 N. 3d st., Phila., Pa.
Lowentraut, P., 17 Kent st., Newark, N. J.
Lutgen, F. H., Reading, Pittsburgh, Pa.
McBain, Thos. A., 640 W. 38th st, N. Y.
McKeown, H. J., 196 E. Front st., Cincinnati, Ohio.
McPherson, K., 618 Court st., B'klyn, N. Y.
McWilliams, John, & Co., 39 Dey st., N. Y.
Macready, Joseph, Av. A, n. E. 68th st., N. Y.
Madden Cochayne File Co., Middletown, N. Y.
Madden, John, 338 E. 122d st., N. Y.
Maloney, P. S., 1028 Filbert st., Phila., Pa.
Maltby, Curtiss & Co., Black Hill rd., Waterbury, Conn.
Mann, H., Waterville, Vt.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Mansfield, E. & Co., 84 Exchange st., Bangor, Me.
Marble, G. W., 28 S Canal st., Chicago, Ill.
Marks, Oscar F., 142 Fulton st., N. Y.
Mayhew, H. H., & Co., Shelburne, Mass
Mead, Isaac V., 370 av. A, N. Y.
Messina, R., 188 Elizabeth st., N. Y.
Metcalf, Paul & Co., 64 Clinton st., Chicago, Ill.; 7th av. & Smithfield st., Pittsburgh, Pa.
Michigan Axe & Tool Co., East Saginaw, Mich.
Middlesex Mfg. Co., Middletown, Conn.
Mills, C. W., 287 S. Canal st., Chicago, Ill.
Miller, G. W., 8 Uhlers al., Baltimore, Md.
Miller's Falls Co., Montague, Mass.
Milton, S. G., Jr., S. 30th, c. Walnut st., Phila., Pa.
Mixter, J. W, & Co., Plymouth, Mass.
Mockridge & Son, 97 Market st., Newark, N.J.
Montgomery & Co., 105 Fulton st., N. Y.
Monk, C., 190 16th st., Brooklyn, N. Y.
Moody, J A., Akron, O.
Moore, C. H., Toledo, O.
Morgan Engineering Co., 96 Liberty st., N. Y.
Mott, W., 250 W. 28th st., N. Y.
Myers, H. M., & Co., Beaver Falls, Allegheny, Pa.
National Tool Co., Williamsport, Pa.
Nevins, M, 2 0 Centre st., N. Y.
New England Novelty Works, Hill. N. H.
Newell, Andrew, 417 W. 41st st., N. Y.
New Haven Copper Co., 294 Pearl st., N. Y.; Seymour, Conn.
Newkirk, Richie & Bills (Ltd.), 3015 Chestnut st., Phila., Pa.
Niagara Stamping & Tool Co., Buffalo, N. Y.
Nicklas & Beyers, 20 Broome st., Newark, N.J.
Niles Tool Works, 96 Liberty st., N, Y.; N. 7th, c. Arch st., Phila., Pa.
Nilhaus & Meyer, 290 W. 5th st., Cincinnati, O.
Nolting, Theodore, r. 492 10th av., N. Y.
Novelty Mfg. Co., North Adams, Mass.
Nutting, L. M. & Co., Concord, N. H.
Oberheu, L. C., 971 Central av., Cincinnati, O.
O'Donnell, P., 1794 N. 5th st., Phila., Pa.
Ohio Tool Co., Columbus, O.
Olmsted & Co., 75 N. Clinton st., Chicago, Ill.
Orum, M. L., 448 N. 12th st., Phila., Pa.
Osborne, C. S., & Co., 96 Mechanic st., Newark, N. J.
Osborne, H. F., 44-46 Hill st., Newark, N. J.
Ostergren, A. J., 214 23d st., Brooklyn, N. Y.
Pedrick & Ayer, 1025 Hamilton st., Philadelphia, Pa. 69.
Philadelphia Tool Co., Oakford, n. S. 28th st, Philadelphia, Pa.
Phillips, F., 1024 Greenmount av., Baltimore, Md.
Phœnix Bit Brace Co., Orchard Park, N. Y.
Palmer, Cunningham & Co., Philadelphia, Pa.
Park City Machine & Tool Co. (The), 88 102 Cannon st., Bridgeport, Conn.
Parr, F., Georgia, c. Efner st., Buffalo, N. Y.
Passaic Mfg. Co., 29 Oliver st., Newark, N. J.
Patterson, H. T., & Co., 146-150 Centre st., N.Y.
Pierce, W. R., 111 Summer st., Providence, R. I.
Pingree, Henry C., Rockport, Mass.
Pittsburgh Tool Co., Irwin, c. North av., Allegheny, Pa.
Place, Geo., 120 B'way, N. Y. 81.
Pollard, J. G., 141 Raymond st., B'klyn, N. Y.
Pond Machine Tool Co., 111 Liberty st., N. Y.
Pope, J. & Son, Manchester, Me.
Powell Tool Co., 31 Elm st., Cleveland, O.
Pratt, James T., & Co., 53 Fulton st., N. Y.
Pratt & Whitney Co., 98 W. Washington st., Chicago, Ill.
Prentiss Tool & Supply Co., 42 Dey st., N. Y.
Prentiss Vise Co., 23 Dey st., N. Y.
Price, M., 334 Mulberry st, Newark, N. J.
Provost, M. B., Hedenberg Works, Newark, N. J.
Pugh, J. T., rear 3112 Market st., Philadelphia, Pa.
Quilen, B., 4 Essex mkt., N. Y.
Quinn, W. H., & Co., 99 Chambers st., N. Y.
Racky, J. & Co., 356 5th av., Chicago, Ill.
Read, Gleason & Read, 136 Kent av., B'klyn, E. D., N. Y.
Reed, A. O., Higganum, Conn.,
Reichhelm, E. P., & Co., 80 Nassau st., N. Y.
Renschack, Wm., 211 Canal st., N. Y.
Rittenhouse, G. E., Akron, O.
Robbins, E. W., 24 Brown st, Waterbury, Conn.
Robbins, F. A., 221 1st st., San Francisco, Cal.
Rose, Wm. & Bro., 35-37 Filbert st., Philadelphia, Pa.
Roth, B., Tool Co., Market, c. 18th st, St Louis, Mo.
Robery, A., Auburn, N. Y.
Rothery, J. & W., Matteawan, N. Y.

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Rouff, W., r. 131 Green st., Phila., Pa.
Rowley, M. N., 52 Woodward av., Detroit, Mich.
Rushwell Auger Co., St. Joseph, Mo.
Russell, Jennings Mfg. Co., Deep River, Conn.
Rust, O., St. Joseph, Mo.
Sackett Mfg. Co., Wallingford, Conn.
St. Louis Vise & Tool Co., 1420 N. 10th st., St. Louis, Mo.
Sandusky Tool Co., Sandusky, O.
Sandford Fork & Tool Mfg. Co., Cortlandt, N. Y.
San Francisco Tool Co., 11 Stevenson st , San Francisco, Cal.
Sauerbier's, H., Son, 291 N. J. R. R. av., Newark, N. J.
Sawyer, S., Fitchburgh, Mass.
Saxton & Osgood, 13 Lloyd st., Buffalo, N. Y.
Schaal, G. A., & Co., 621 2d st., Baltimore, Md.
Schlueter, Albert, 363 Market st., Newark, N. J.
Schmachtenberg, F., 20 Broome st., Newark, N. J.
Schmidt, Henry C., 104 Centre st., N. Y.
Schrick, A., 831 N. 8th st., St. Louis, Mo.
Schueddig, F., 1309 Merchant st., St. Louis, Mo.
Sellers, Wm., & Co. (Inc.), 1600 Hamilton st., Phila., Pa.
Shimwell, B., & Son, 217 S. 24th st., Phila., Pa.
Siegley, J., Wilkesbarre, Pa.
Sigourney Tool Co., Hartford, Conn.
Smiley, James, 612 W. 55th st., N. Y.
Smith, J. O., 627 Dover st., Baltimore, Md.
Smith, Otis A., Middlefield, Conn.
Snell Mfg. Co., Sturbridge, Mass.
Sowers, W. H., 412 Commerce st., Phila., Pa.
Spargo Bros., Commerce, c. Whiting st., New Haven, Conn.
Stacy, E. S., Springfield, Mass.
Standard Rule Co., Farmington, Conn.
Standard Tool Co., 33 Chambers st., N. Y.; Bond, c. Rockwell st., Cleveland, O. **49.**
Stanley Rule & Level Co., 29 Chambers st., N. Y.
Starr, J., 172 Johnson st., B'klyn, N. Y.
Starrett, L. S., Athol, Mass.
Stegmann, J., 1601 N 17th st., St. Louis, Mo.
Stephen, T., 231 Butler st., B'klyn, N. Y.
Stephens, Melvin, 41 Dey st., N. Y.
Sterling Wrench Co., Sterling, O.
Stevens Arms & Tool Co., Chicopee Falls, Mass.
Stone, I. I., & Co , 49 S. Jefferson st., Chicago, Ill.
Stone, J. C., & Co., 370 Atlantic av., Boston, Mass.
Strack, W., 508 W. 43d st., N. Y.
Stratton Bros., Greenfield, Mass.
Surerus & Co. (Hedenberg Works), Newark, N. J.
Suhr, Emil, 174 Centre st., N. Y.
Sullivan, J. F., r. 220 N. 2d st., Phila., Pa.
Swan, J., Seymour, Conn.
Tallman & McFadden, 1025 Market st., Phila., Pa.
Tallon, G., 337 Bond st., Brooklyn, N. Y.
Tallon, J., ft. W. 55th st., N. Y.
Tammany, H., ft. E. 144th st., N. Y.
Tapscott & Hubberd, 24 Cliff st., N. Y.
Terrell & Vroom, 368 8th av., N. Y.
Terhune, A. V., 86 Centre st., N. Y.
Thompson, Frank, 178 Centre st., N. Y.
Thompson, W. S., 420 W. 27th st., N Y.
Thompson & Nathanson, Milwaukee, Wis.
Thompson & Nathanson Boring Tool Co., Rockford, Ill.
Toledo Wrench Co., Toledo, O.
Townsend, Thos., & Co., 210 Centre st., N. Y.
Trenton Vise & Tool Works, Trenton, N. J.
Tretheway, Samuel & Co. (Ltd.), 49th & Harrison sts , Pittsburgh, Pa.
Tuck Mfg. Co., Brockton, Mass.
United States Tool Co., South Newmarket, N. H.
Van Wagenen, Geo., 233 West st , N. Y.
Vare, J. A., 110 N. 4th st., Phila., Pa.
Vaughn, J. A., 448 High st., Providence, R. I.
Veit, J., 135 Green st., Phila., Pa.
Verona Tool Works, Pittsburgh, Pa.
Vogel, H., 480 E. Houston st., N. Y.
Ward, J., 166 W. Kinney st., Newark, N. J.
Ward & O'Brien, 20 W. 12th st., Chicago, Ill.
Warner & Swasey, E. Prospect st., Cleveland, Ohio.
Washburn, J. R., Stafford, Conn.
Washoe Mfg. Co., 309 8th av., Newark, N. J.
Waterbury, Geo. D., 191 Lewis st., N. Y.
Wayne, J. L., Jr., 140-142 Main st., Cincinnati, Ohio.
Wehrfritz, W., 263 N. 5th st., Phila., Pa.
Weichhort, J., 143 Beale st., San Francisco, Cal.
Weiss, F. W., 39 Nassau st., N. Y.
Wellman, F. H., 6th, c. Main st., Cincinnati, Ohio.
Wells Bros. & Co., Greenfield, Mass.
Western Steam Forge & Tool Works, 221 Chestnut st., St. Louis, Mo.
Whitcomb, G., Springfield, O.
Whitcomb, James O., 50 Centre st., N. Y.
White, A. M., 25 Brown st., Waterbury, Conn.
White, L. & I. J., 310-314 Exchange st., Buffalo, N. Y.
Wilton, D. E., Stafford, Conn.
Whorff, B., Skowhegan, Me.
Wichelhaus, E., Hedenberg Works, Newark, N. J.
Widmer, F., & Son, 375 Market st., Newark, N. J.
Wilcox, J & Co., Port Chester, N. Y.
Wilkins, Monroe P., 46 Marion st., N. Y.
Wilkinson, H., Canton, Conn.
Winkler, C., 2 Commercial st., Newark, N. J.
Williams, C. A., & Co , Skowhegan, Me.
Wiseman, H. G., Springfield, O.
Wood, W. E., 1023 N. Main st., St. Louis, Mo.
Wood, Wm. T., & Co., 49 N. Market st., Boston, Mass.
Woodward, F. R., Hill, N. H.
Worden Tool Co. (The), 91 Leonard st., Cleveland, O.
Yerkes & Plumb, Trenton av., c. Tucker st., Fkd., Phila., Pa.
Zerbarini, Chas., 56 Centre st., N. Y.

Tools—Machine.

Acme Machinery Co., Cleveland, O.
Adams & Shumacker, 247 Sycamore st., Cincinnati, O.
Allen, N. W. & Co., 300 E. Pratt st., Baltim re, Md.
American Twist Drill Co., Laconia, N. H
American Tool & Machine Co., Boston, Mass.
Ames Mfg. Co., 33 Pemberton sq., Boston, Mass.; Chicopee, Mass **64.**
Andres, H., 22 N. 4th st., Phila., Pa.
Armstrong Mfg. Co., Bridgeport, Conn. **33.**
Bancroft, W. F. & Co., Lagrange, c. N. & W. R. R., Worcester, Mass.
Bass Foundry & Machine Co., Fort Wayne, Ind.
Basshon, T. C., & Co., 30 Light st., Baltimore, Md.
Barker, W., & Co., 140 E. 6th st., Cincinnati, O.
Beaman & Smith, Providence, R. I.
Belden, R. A., Co. (The), Danbury, Conn.
Bell, Thos. J., & Co., Broadway, c. 2d st., Cincinnati, O.
Bement, Mills & Co., Callowhill, c. N. 21st st., Phila., Pa.; 120 B'way, N. Y.
Bemis & Call Hardware & Tool Co., 14 Taylor st., Springfield, Mass.
Besley, Chas. H., & Co., 175 E. Lake st., Chicago, Ill.
Betts Machine Co., Wilmington, Del.
Bickford Drill Co., Front, c. Pike st., Cincinnati, O.
Billings & Spencer Co. (The), 216 Lawrence st., Hartford, Conn.
Blair, S. F., & Co., 118 Market st., Phila., Pa.
Blairsdell, P., & Co., 62 Jackson st., Worcester, Mass.
Birkenhead, John, Mansfield, Mass.
Birkett, J. W., 67 Smith st., Brooklyn, N. Y.

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Bogert, John L., Flushing, L. I., N. Y.
Bonney Vise & Tool Co. (Ltd.), 3015 Chestnut st., Phila., Pa.
Boston Tool Co., 43 Milk st., Boston, Mass.
Bradley & Co., Syracuse, N. Y.
Brady, F., 1737 Frankford av., Phila., Pa.
Brainard Milling Machine Co., Hyde Park, Mass.
Brettell, Geo. E., River & N. Water sts., Rochester, N. Y.
Bridgeport Machine Tool Works, Bridgeport, Conn.
Bright, F. E., 835-837 Sheriff st., Cleveland, O.
Brown, J. & Sons, 722 E. Pratt st., Baltimore, Md.
Brown & Sharpe Mfg. Co., 23 S. Canal st., Chicago, Ill.; Promenade, n. Park st., Providence, R. I.
Buckeye Iron & Brass Works, Dayton, O.
Buck, M. M. & Co., 209 N. 3d st., St. Louis, Mo.
Bullard, E. P., 72 Warren st., N. Y.; Bridgeport, Conn.
Burton Matthew Mfg. Co., 220 Wabash av., Chicago, Ill.
Butterfield & Co., Derby Line, Vt.
Cady, George L., Thorndyke, c. Western st., Lowell, Mass.
Card, S. W. & Co., Mansfield, Mass.
Carey, T. K., & Co., 21 St. Charles st., Balto., Md.
Carpenter, J. M., Pawtucket, R. I.
Chapman, Herbert W., 227-231 Mulberry st., Newark, N. J.
Chicago Engineer Supply Co., 18 Dearborn st., Chicago, Ill.
Cincinnati Screw & Tap Co., Pearl, c. Plum st., Cincinnati, O.
Cleveland Twist Drill Co., 24-26 West st., Cleveland, O. **24.**
Codd, W. C., 2010 Aliceanna st., Balto., Md.
Columbia Iron Foundry, 36 Front st., Chicago, Ill.
Conghlin, M. T., 49 N. Market st., Chicago, Ill.
Cook & Co., 22 Cortlandt st., N. Y.
Crook, Horner & Co., Baltimore, c. Howard st., Balto., Md.
Currier & Snyder, 131 Central st., Worcester, Mass.
Cushman Chuck Co. (The), Cushman st., Hartford, Conn.
Dallett, Thos. H. & Co., 13th, c. Buttonwood st., Phila., Pa.
Darling, Brown & Sharpe, Promenade, n. Park st., Providence, R. I.
Davis, W. P., North Bloomfield, N. Y.
Dent, Wm. & Son, Utica, N. Y.
Detrick & Harvey, Balderston, c. Grant st., Balto., Md.
Diamond Wrench Co., 222 Newbury st., Portland, Me.
Dodge, Haley & Co., 45 Oliver st., Boston, Mass.
Donegan & Swift, 174 Fulton st., N. Y.
Duncan, W. P. & Co., Bellefonte, Pa.
Dustin Mfg. Co., Dexter, Me.
Eddy, Geo. B., 398 Madison st., N. Y.
Energy Mfg. Co, 1115 S. 15th st., Phila., Pa. **57.**
Erie Machine Tool Co., Erie, Pa.
Evans, John, 13th st., above Buttonwood st., Phila., Pa.
Eynon, W. R. & Co., Leonard st., Cleveland, Ohio.
Fairbanks, G. L., 89 Exchange st., Worcester, Mass.
Farmer Rolling Mill Co. (The), Grand Rapids, Mich.
Fay, C. P., Springfield, Mass.
Fay & Scott, Dexter, Me.
Featherstone, John, 354 N. Halstead st., Chicago, Ill.
Ferguson, W. J. & Co., 408 W. Baltimore st., Balto., Md.
Fifield, G. W., Lowell, Mass.; South Newmarket, N. H.
Fish, A. J. & Co., 57 Lake st., Chicago, Ill.
Fitchburg Machine Works, Fitchburg, Mass
Fitzpatrick, M. E., South av., c. Water st., Bridgeport, Conn.
Flanders, L. B., Machine Works, 1325 Hamilton st., Phila., Pa.
Flather & Co., Nashua, N. H.
Forsaith, S. C., Machine Co., Manchester, N.H.
Fox, H. L. & Co., St. Louis, Mo.
Frasse & Co., 92 Park Row, N. Y.
Fuller, J. A. & Co., 3 Cypress st., Worcester, Mass.
Gage Machine Works, Waterford, N. Y.
Garvin, E. E. & Co., 139-143 Centre st., N. Y.
Gibson, A. M. & D., 138 W. Lake st., Chicago, Ill.
Gilkerson Machine Works, Homer, N. Y.
Gleason, Wm., 10 Brown's Race, Rochester, N. Y.
Goodnow & Wightman, 176 Washington st., Boston, Mass.
Gould & Eberhardt, 97 N. J. R. R. av., Newark, N. J.
Gray, G. A., Jr., & Co., 8th & Sycamore sts., Cincinnati, O.
Greenfield, W. G. & G., 400 N. 5th st, Newark, N. J.
Griswold, G. M., 187 St. John st., New Haven, Conn.
Gurney, C. H., & Co., 247 E. Lake st., Chicago, Ill.
Hall, E. L., & Co., 19 N. 7th st., Philadelphia, Pa.
Hand, S. A., Mfg. Co., Toughkenamon, Pa.
Harris, Samuel & Co., 41 S. Canal st., Chicago, Ill.
Harrington, Edwin, Son & Co., 15th st., c. Penn. av., Philadelphia, Pa.
Hart Mfg Co., 117 Public sq., Cleveland, O.
Hartford Tool Co., 262 Main st., Hartford, Conn.
Hartley, Simeon, 245 N. J. R. R. av., Newark, N. J.
Hayden, G. D., Alton, Ill.
Healy, G., 13 Alling st., Newark, N. J.
Henderer, E., & Co., Wilmington, Del.
Hendey, Joshua, Machine Works (The), Mission, c. Fremont st., San Francisco, Cal.; Torrington, Conn.
Herrick & Cowell, 39 Artizan st., New Haven, Conn.
Hewes & Phillips Iron Works, Newark, N. J.
Hill, Clark & Co., 156 Oliver st., Boston, Mass.
Hilles & Jones, Wilmington, Del.
Horton, Everett, Bristol, Conn.
Howard, Geo. C., 17 S. 18th st., Philadelphia, Pa.; 12 Cortlandt st., N. Y.
Jackson, T. A., 388 11th av., N. Y.
Jackson, C. L., & Co., 14 W. German st., Baltimore, Md.
Johnson, J. H., Jr., & Co., 1422 Callowhill st., Philadelphia, Pa.
Jones & Lamson Machine Co., Windsor, Vt.
Jordan & Gottfried, 208 Canal st., N. Y.
Kaufholz Bros., 106-108 Canal st., Cleveland, Ohio.
Kelly, Daniel, 51 N. 7th st., Phila., Pa.
Kerrick, J. H., 2d av. N. & 5th st., Minneapolis, Minn.
Kilburn, Lincoln & Co., 13 Canal st., Fall River, Mass.
King, A. R., 38 Gold st., N. Y.
King, J. M., & Co., Waterford, N. Y.
Kirkwood, T. S., & A. J., 12 S. Canal st., Chicago, Ill.
Knowlton Mfg. Co., Rockford, Ill.
Konigslow, O., 49 Michigan st., Cleveland, O.
Kraeuter & Co., Newark, N. J.
Lathe & Morse Tool Co., Worcester, Mass.
Law, J. L., Jr., 110 John st., N. Y.
Le Count, C. W., S. Norwalk, Conn.
Leet, C. D., Golden Hill, c. Water st., Bridgeport, Conn.
Lincoln & Co., 54-70 Arch st., Hartford, Conn.
Lodge, Davis & Co., Cincinnati, O.
Lodge, Barker & Co., 6th st. & Eggleston av., Cincinnati, O.
Lovell, F. S., Fitchburg, Mass.
Lovegrove & Co., 152 N. 3d st., Phila., Pa.

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McFarlan & Nottingham Co., 220 W. 2d st., Cincinnati, O.
McGown Bros., 5 1st st., San Francisco, Cal.
McMahon & Co., Water, c. Ledge st., Worcester, Mass.
Machine Tool Works, (The), 24th, c. Wood st., Phila., Pa.
Machinists' Supply Co. (The), 16 Lake st., Chicago, Ill.
Mackinnon, J. A., Machinery Co. (The), 22 Warren st., N. Y.
Malpass, G., 726 Girard av., Phila., Pa.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Mansfield Watch Tool Co., Mansfield, Mass.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Merritt, E., & Co., Brockton, Mass.
Michel, F. P., Mill, ft. Platt st., Rochester, N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Morton, Reed & Co., 5 E. German st., Baltimore, Md.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Muller Machine Tool Co., 182 W. Pearl st., Cincinnati, O.
New Haven Mfg. Co., 30 Whitney av., New Haven, Conn.
Newton, Chas. C., 2341 Callowhill st., Phila., Pa.
Newton Watch Tool Works, Phila., Pa.
New Process Drill Co. (The) (Room 25), 102 Chambers st., N. Y.
N. Y. Machinery Depot, 16 Brooklyn Bridge Arch, N. Y.
Nicholson & Waterman, Providence, R. I.
Nicklin, J. H., 163 Park Row, c. Pearl st., N. Y.
Nightingale, S. G., & Childs, 134 Pearl st., Boston, Mass.
Niles Tool Works, Hamilton, O.; 96 Liberty st., N. Y.; 713 Chestnut st., Phila., Pa.; Chicago, Ill.
Oesterlein & Bernhardt, 170 W. 2d st., Cincinnati, O.
Oneida Steam Engine & Foundry Co., Oneida, N. Y.
Packard, O. L., Milwaukee, Wis.
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Parke & Lacy, 8 California st., San Francisco, Cal
Patterson, Calender & Co., Dayton, O.
Patterson, H. T., & Co., 146-150 Centre st., N. Y.
Paul, J. & Co., 61 S. Main st., Waterbury, Conn.
Pawtuxet Valley Machine Co., 140 Congress st., Boston, Mass.
Pawtucket Valley Machine Co., Phœnix, R. I.
Pedrick & Ayer, Phila., Pa. **60.**
Perkins, Cyrus, Lowell, Mass.
Perkins, F. S., 12 Fletcher st., Lowell, Mass.
Pittsburgh Tool Co., c. North st. & Irwin av., Allegheny, Pa.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Place, Geo., 120 Broadway, N. Y. **81.**
Pollock, Alex., 212 West st., N. Y. **32.**
Pond Machine Tool Co., Plainfield, N. J.; 161 Union st., Worcester, Mass.
Porter, J. E., Hatfield, Mass.
Powell Machine Tool Co., 140 Union st., Worcester, Mass.
Pratt & Whitney Co., 1 Flower st., Hartford, Conn.
Prentice Bros., 49 Hermon st., Worcester, Mass.
Prentice, A. W. & Co., Norwich, Conn.
Prentiss Tool & Supply Co. (The), 42 Dey st., N. Y.
Price & Force, 249 E. Monroe st., Chicago, Ill.
Putnam Machine Co., 115 Liberty st., N. Y.
Putnam Tool Co., Fitchburg, Mass.
Randall, E. H. & Co., 154 E. Lake st. (Room 20), Chicago, Ill.
Raze & Davis, 35 5th av., Chicago, Ill.
Reed, F. E., 120-124 Gold st., Worcester, Mass.
Reed, J. B., Cairo, Ill.
Remington & Co., Wilmington, Del.
Renter & Mallory, 22 Light st., Balto., Md.
Rexford, R. W., 7 S. 6th st., Phila., Pa.
Rhode Island Tool Co., Providence, R. I.
Rich, Fred A., 23 S. Canal st., Chicago, Ill.
Richards, I. P., 118 Acorn st., Providence, R. I.
Richardson, G. L., Lowell, Mass.
Rochester Machine Tool Works, Rochester, N. Y.
Rogers, J. F. & Co., 42 N. 6th st., Phila., Pa.
Rollins, G. A. & Co., Nashua, N. H.
Rose Pipe Vise Co., 154 E. Lake st., Chicago, Ill.
Rouse R. R. Mfg. Co., Indianapolis, Ind.
Rowland, F. C. & A. E., 413 Chapel st., New Haven, Conn.
Rumsey, L. M. Mfg. Co., 810 N. 2d st., St. Louis, Mo.
San Francisco Tool Co., 1st & Stevenson sts., San Francisco, Cal.
Saunder's, D. Sons, Yonkers, N. Y.
Sebastian, May & Co., 177 W. 2d st., Cincinnati, O.
Sellers, Wm. & Co., 1600 Hamilton st., Phila., Pa.
Sharp, T. & Co., Salem, O.
Shepard, H. L., 134 E. 2d st., Cincinnati, O.
Sigourney Tool Co., 2 Cushman st., Hartford, Conn.
Simpson, J. S. & G. F., 26-36 Rodney st., B'klyn, N. Y.
Slate, D., 262 Main st., Hartford, Conn.
Smith, H. B., Machine Co., 925 Market st., Phila., Pa.
Smith, Samuel A., 23 S. Canal st., Chicago, Ill.
Smith & Egge Mfg. Co., Lafayette, c. Allen st., Bridgeport, Conn.
Southwark Foundry & Machine Co., Phila., Pa.
Spedden & McClymount, 913 S. B'way, Balto., Md.
Spencer, J. E., Railroad av., c. Broad st., Bridgeport, Conn.
Standard Tool Co., 33 Chambers st., N. Y.; Athol, Mass.; Bond, c. Rockwell st., Cleveland, O. **49.**
Star Tool Co., Mason, c. Beverly st., Providence, R. I.
Stark, John, Waltham, Mass.
Starrett, L. S., Athol, Mass.
Steptoe, J. A. Co., 214 W. 2d st., Cincinnati, O.
Stevens, Benj. F., 20 Arch st., Lowell, Mass.
Stevens, J., Arms & Tool Co., Chicopee Falls, Mass.
Stiles & Parker Press Co., 203-207 Centre st., N. Y.; Middletown, Conn.
Storrs & Candee, 300 Asylum st., Hartford, Conn.
Stow Flexible Shaft Co. (Ltd.), 2218 Penna. av., Phila., Pa. **26.**
Strelinger, C. A. & Co., 86 Woodward av., Detroit, Mich.
Swampscot Machine Co., S. Newmarket, N. H.
Syracuse Twist Drill Co., Syracuse, N. Y.
Tallman & McFadden, 1025 Market st., Philadelphia, Pa
Tatum & Brown, San Francisco, Cal.
Thomas, W. S., Laconia, N. H.
Tisch, L., White, c. Elm st., N. Y.
Toomey, Frank, 131 N. 3d st., Phila., Pa.
Tower & Lyons, 95 Chambers st., N. Y,
Union Mfg. Co., New Britain, Conn.
Universal Radial Drill Co., W. 8th, c. Sycamore st., Cincinnati, O.
Utility Wrench Co., 61 N. J. R. R. av., Newark, N. J.
Van Wagenen, Geo., 233 West st., N. Y.
Vogel, H., 478 E. Houston st., N. Y.
Walker Wrench Co., 154 E. Lake st., Chicago, Ill.
Wallace & Bro., 432 E. Pratt st., Baltimore, Md.
Walter Bros., 105 Cannon st., Bridgeport, Conn.
Wardell, C. F., 58 S. Canal st., Chicago, Ill.

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Warden, McClelland & Co., 25 Broadway, Cincinnati, O.
Warner & Swasey, Cleveland, O.
Warren, W. H., 20 Harris st., Worcester, Mass.
Washburn, J. R., Stafford, Conn.
Washburn Machine Shop, Boynton, n. Highland st., Worcester, Mass.
Waterhouse Electric & Mfg. Co. (The), Hartford, Conn.
Waters Mfg. Co., 266 Washington st., Boston, Mass.
Watrous, J. J., 213 Race st., Cincinnati, O.
Watts-Campbell Co. (The), 298 Ogden st., Newark, N. J.
Wells Bros., & Co., Greenfield, Mass.
Wheeler, J. S., & Co., 23 Hermon st., Worcestor, Mass.
Whitcomb, Alonzo, c. Gold & Sargent sts., Worcester, Mass.
Whitcomb Mfg. Co., Worcester, Mass.
Whitney, G. H., Nashua, N. H.
Whiton, D. E., Stafford, Conn.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Wilkinson, A. J. & Co., 184-188 Washington st., Boston, Mass.
Woods, S. A., Machine Co., 91 Liberty st., N.Y.
Woodward & Rogers, 292 Main st., Hartford, Conn.
Wormser, G. S., Detroit, Mich.
Wright, A. L., Rock, c. Fletcher st., Lowell, Mass.
Wright, L., Jr., 9-11 Alling st., Newark, N. J.
Yates & Underhill, 88 Middle st., Bridgeport, Conn.
York, S. M., 67 S. Water st., Cleveland, O.
Young, W. C., & Co., 19 Church st., Worcester, Mass.

Tools—Metal Working.

Armstrong Mfg. Co., Bridgeport, O. **33.**
Blaisdell, P., & Co., Worcester, Mass.
Bement, Miles & Co., Phila., Pa.
Betts Machine Co., Wilmington, Del.
Brombacher's, Jacob, Sons, 20 Cliff st., N. Y.
Enterprise Machine Co., Minneapolis, Minn.
Eynon, W. R., & Co., Cleveland, O.
Ferracute Machine Co., Bridgeton, N. J. **15.**
Gordon & Gilbert, 218 New st., Phila., Pa.
Harrington, Edwin, Son, & Co., 15th st. and Penna. av., Phila., Pa.
Holroyd & Co., Waterford, N. Y.
Kerrick, J. H., 2d av. N., and 5th st., Minneapolis, Minn.
King, J. M., & Co., Waterford, N. Y.
Packard, O. L., Milwaukee, Wis.
Place, Geo., 120 Broadway, N. Y. **81.**
Pond Machine Co., Worcester, Mass.
Pratt & Whitney Co., Hartford, Conn.
Rich, Fred A., 39 S. Canal st., Chicago, Ill.
Sellers, Wm., & Co. (Inc.), Phila., Pa.
Smith, H. B., Machine Co., Smithville, Pa.
Strelinger, Chas. A., & Co., 86 Woodward av., Detroit, Mich.
Wiley & Russell Mfg. Co., Greenfield, Mass.
Worswick Mfg. Co., Water & St. Clair sts., Cleveland, O.

Tools—Mining.

Beall Bros., Alton, Ill.
Buck, M. M., & Co., 209 N. 3d st., St. Louis, Mo.
Collins & Co., 212 Water st., N. Y.
Carter & Co., Scranton, Pa.
Eagle Iron Works, Wilkesbarre, Pa.
Eddy, Geo. A., Alton, Ill.
Elk Hill Coal & Iron Co., Scranton, Pa.
Gribble, Jas., 100 E. 89th st., N. Y.
Johnson, Warren P., Oskaloosa, Ia.
Klein, Logan & Co., 107 Chambers st., N. Y.

Tools—Oil Well.

Carrol, McCandlish & Co., Bradford, Pa.
Herbertson, J., & Sons, Brownsville, Pa.
Irvine & Morgan, Duke Centre, Pa.
McDougall & Potter, 606 W. 55th st., N. Y.
Norris, H. W. & W. C., Irona, Pa.
Phillips, Chas., Richburgh, N. Y.
Pierce Well Excavator Co., Long Island City, N. Y.
Smith, Jas., Franklin, Pa.
Walker, W. C., & Co., Bradford, Pa.

Tools—Portable Power.

Stow Flexible Shaft Co. (Ltd.), 2218 Penna. av., Phila., Pa. **26.**

Tools—R. R. Shop.

Allison Mfg. Co. (The), Phila., Pa.
Barnes Co., W. F. & John, Rockford, Ill. **49.**
Buffalo Hammer Works, Buffalo, N. Y.
Carter & Co., Scranton, Pa.
Collins & Co., 212 Water st., N. Y.
Ewing, Mitchell & Co., 137 1st av., Pittsburgh, Pa.
Flanders, L. B., Machine Works (The), 1025 Hamilton st., Phila., Pa.
Greeley, E. S., & Co., 5 and 7 Dey st., N. Y.
McBain, T. A., 640 W. 38th st., N. Y.
Palmer, Cunningham & Co. (Ltd.), 607 Market st., Phila., Pa.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Pratt & Whitney Co., Hartford, Conn.
Western Forge & Tool Works, 1220 & 1222 Collins st., St. Louis, Mo.

Tools—Sheet Metal.

Ferracute Machine Co., Bridgeton, N. J. **15.**
Crosby, G. A., & Co., 261 Randolph st., Chicago, Ill.

Tools—Ship

White, L., & I. J., 310-314 Exchange st., Buffalo, N. Y.

Tools—Special.

Atwood & McCaffrey, 60 3d av., Pittsburgh, Pa.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Bement, Miles & Co., Callowhill & 21st st., Phila., Pa.
Brown & Sharp Mfg. Co., Providence, R. I.
Bright, F. E., 835 Sheriff st., Cleveland, O.
Buch, M. M., & Co., 209 N. 3d st., St. Louis, Mo.
Colt's Patent Fire Arms Mfg. Co., Hartford, Conn.
Columbus Machine Co., Columbus, O.
Evon, W. R., & Co., Leonard & Winter sts., Cleveland, O.
Johnson, Israel H., Jr., & Co., 1423 Callowhill st., Phila., Pa.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Metcalf, Paul, & Co., Pittsburgh, Pa.; 66 S. Clinton st., Chicago, Ill.
Montgomery, Robt. W., 446 N. 12th st., Phila., Pa.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Peck, A. G., & Co., Cohoes, N. Y.
Pittsburgh Tool Co., Pittsburgh, Pa.
Pond Machine Co., Worcester, Mass.
Pratt & Whitney Co., Hartford, Conn.
St. Louis Shovel Co., St. Louis, Mo.
Sellers, Wm., & Co., 1600 Hamilton st., Phila., Pa.
Shaw & Geary, 53 N. 7th st., Phila., Pa.
Smith & Egge Mfg. Co., 188 Lafayette st., Bridgeport, Conn.
Standard Tool Co., Cleveland, O.; 33 Chambers st., N. Y. **49.**
Verona Tool Works, Pittsburgh, Pa.
Wohnlich, L. J., 277 Jefferson av., Detroit, Mich.

Tools—Telegraph Line.

Bunnell, J. H., & Co., 106 Liberty st., N. Y.
Electrical Supply Co., 171 Randolph st., Chicago, Ill.
Greeley, E. S., & Co., 5 Dey st., N. Y.

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Tools—Track.

Brooklyn Railway Supply Co., 44 Walworth st., Brooklyn, N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Greeley, E. S., & Co., 5-7 Dey st., N. Y.
Haines Bros., 55 Broadway, N. Y.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Iron City Tool Works (Ltd.), 32d & Smallman sts., Pittsburgh, Pa.
Lee & Hunt, Arkwright Works, Nottingham, Eng.
Lewis Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Metcalf, Paul & Co., Liberty st., Pittsburgh, Pa.; 64 Clinton st., Chicago, Ill.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bldg., N. Y.
Street Railway Supply Co., Cleveland, O.
Verona Tool Works, 1 McCrane's Blk., Pittsburgh, Pa.; Chicago, Ill.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Western Forge & Tool Works, 1220 Collins st., St. Louis, Mo.
Wharton, Wm., Jr., & Co. (Inc.), 25th st. & Washington av., Phila., Pa.

*Tools—Wood Working.

Packard, O. L., Milwaukee, Wis.

*Tools—Water, Gas & Steam Fitters.

Armstrong Mfg. Co., Bridgeport, Conn. **33.**

*Tool Sharpeners.

Emerson, Smith & Co., Beaver Falls, Pa.

Torches—Portable.

Dangler Vapor Stove & Refining Co., Cleveland, O.

Torpedoes—Track.

Greeley, E. S., & Co., 5-7 Dey st., N. Y.
Hoole Mfg. Co., 46 Bond st., N. Y.

Towels for Wiping Machinery.

Dunbar, Geo. & Co., 74 Pearl st., Boston, Mass.

*Track Appliances—Street Railway.

Wharton, Wm., Jr., & Co., 25th st. & Washington av., Phila., Pa.

Track Bolts.

American Bolt Co., 270 Lawrence st., Lowell, Mass. **24.**
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Hotchkiss & Upson Co. (The), Cleveland, O.
Kinsley Iron & Machine Works, Canton, Mass.
Louisville Steam Forge Co., Louisville, Ky.
Michigan Bolt & Nut Works, Wight st., Detroit, Mich.
Pardee Car Works, Watsontown, Pa.
Penna. Bolt & Nut Co., Lebanon, Pa.
Pittsburgh Forge & Iron Co., 10th st., Pittsburgh, Pa.
Tidewater Steel Works (Combination Steel & Iron Co.), Chester, Pa.
Tredegar Iron Works (Tredgar Co.), Richmond, Va.
Troy Steel & Iron Co., Troy, N. Y.
Tudor Iron Works, St. Louis, Mo.
Upson Nut Co., Cleveland, O.

Track Cleaners for Street Railroads.

Day, Augustus, 22 Park pl., Detroit, Mich.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

Track—Connecting for Street Railway.

Johnson Steel Street Rail Co. (The), Johnstown, Pa.

Track Drills.

Beland Track Drill Co., 707 N. 2d st., St. Louis, Mo.
Dwight, E. P., 407 Library st., Phila., Pa.
McCoy & Sanders, 26 Warren st., N. Y.
Variety Iron Works Co. (The), 51-89 Scranton av., Cleveland, O.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.

Track Equipment.

Andrews, Frank H., 545 W. 33d st., N. Y.
Cambria Steel, Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Jordan, F., 200 Broadway, N. Y.
N. Y. Railway Supply Co. (Ltd.), 40 Wall st, N. Y.
Ramapo Iron Works, Hillburn, N. Y.

*Tracks—Elevated R. R.

Clay, Geo. W., Pittsburgh, Pa. **54.**

Track Layers.

Holman, D. F., 94 Dearborn st., Chicago, Ill.

Track Lifters.

Dickson Mfg. Co., Scranton, Pa.

Train Telegraphy.

Consolidated Railway Telegraph Co., 115 Broadway, N. Y.
Railway Telegraph & Telephone Co., 2 W. 14th st., N. Y.

Tramways—(Overhead).

Harrington, Edwin, Son & Co., 15th st., c. Penna. av., Phila., Pa.
Salem Foundry & Machine Shops, Salem, Mass.

Transits—Engineers and Surveyors.

Buff & Berger, 9 Province Court, Boston, Mass.
Gurley, W., & L. E., Troy, N. Y.
Heller & Brightly, Spring Garden and Ridge av., Phila., Pa.
Queen & Co., Phila., Pa.
Young & Sons, 43 N. 7th st., Phila., Pa. **12.**

Transfer Tables.

Brill, J. G. Co., Phila., Pa.
Craig, Wm. P., 95 Liberty st., N. Y.
Dorner & Dutton, 14 Winter st., Cleveland, O.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, 22 Merwin st, Cleveland, O.
Haines Bros, 55 Broadway, N. Y.
Hathaway & Robison, 14 Case Bldg., Cleveland, O.
Horace A. Keefer Co. (The), Kansas City, Mo. **38.**
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Ramsey, R. H., 207 E. Chelten av., Philadelphia, Pa.
Street Railway Supply Co., Cleveland, O.
Wm. Wharton Jr. & Co. (Inc.), 25th & Washington sts., Philadelphia, Pa.

Transom Lifters.

Reiher, F. A., 11 S. Canal st., Chicago, Ill.
Russell & Erwin Mfg. Co., New Britain, Conn.; 45 Chambers st., N. Y.; Philadelphia, Pa.
Wallensak, J. F., Chicago, Ill.

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Traps—Steam.

Albany Steam Trap Co., Albany, N. Y.
Aller, Amos, 109 Liberty st., N. Y.
Ashcroft Mfg. Co., 111 Liberty st., N. Y.; Bridgeport, Conn.
Belfield, H., & Co., 435 N. Broad st., Philadelphia, Pa.
Curtis Regulator Co., 60 Beverly st., Boston, Mass. **30.**
Davis, G. M., & Co., 20 S. Canal st., Chicago, Ill.
D'este & Co., 59 Beverly st., Boston, Mass.
Dickson Mfg. Co., Scranton, Pa.
Gold, Edw. E., & Co, c. Frankfort & Cliff sts., N. Y.
Hawes' Patent Improved Steam Traps, 23-25 Dyer st., Providence, R. I.
Jenkins Bros., 79 Kilby st., Boston, Mass.
Kieley, Timothy, 9 W. 13th st., N. Y.
Locke Bros., 17 St. Peter st., Salem, Mass.
Lonergan, J. E., & Co., 211 Race st., Philadelphia, Pa.
Mason Regulator Co., 22 Central av., Boston, Mass. **22.**
Miller Lock Co., Philadelphia, Pa.
Morse, R. B., Steam Trap Co., Naugatuck, Conn.
Providence Steel Trap Co., 22 Codding st., Providence, R. I.
Standard Machine Co. (The), 9th & Taylor sts., Philadelphia, Pa.
Thompson & Bushnell, 120 Liberty st., N. Y.
Walworth Construction Co., 134 Congress st., Boston, Mass.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Watson & McDaniel, 144 N. 7th st., Philadelphia, Pa.
Welch & Lawson, 205 Centre st., N. Y.

Tree Feller.

Hill, Wm. E., & Co., Kalamazoo, Mich.

Trimmings—Railway Car.

Cross, J. E., 115 B'way, N. Y.
Dayton Mfg. Co., Dayton, O.
Greeley, E. S., & Co., 5 Dey st., N. Y.
Hall, Aikman & Co., 44 Park pl., N. Y.
Lewis Fowler Mfg. Co. (The), 27-35 Walworth st., Brooklyn, N. Y.
Martin, Rufus, & Co., 114 Nassau st., N. Y. **52.**
Mead, Mason & Co., 10 Canal st., Boston, Ms.
New Haven Car Trimming Co., 71 Goffe st., New Haven, Conn.
Neumann, Jos., 11th and Race sts., Phila., Pa.
Post & Co., 165 W. Pearl st., Cincinnati, O.
Stewart & Mattson Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.
Union Brass Mfg. Co., 115 B'way, N. Y.; Chicago, Ill.
Yoe, Henry, & Co., Fort and Beaubien sts., Detroit, Mich.

Trimmings—Street Car.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Cross, J. E., 115 B'way, N. Y.
Dayton Mfg. Co., Dayton, O.
Foote, Orlo A., Cleveland, O.
Greeley, E. S., & Co. (The), 5-7 Dey st., N. Y.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus, & Co., 114 Nassau st., N. Y. **52.**
Miller, Chas. B., 310 E. 14th st., N. Y.
Post & Co., Cincinnati, O.
Pugh & Russell, Stewart Bld., N. Y.
Smith, Josephine D., 352 Pearl st., N. Y.
Stephenson, John, Co. (Ltd.), 47 E. 27th st., N. Y.
Stewart & Mattson Mfg. Co. (The), 2042 N. 10th st., Phila., Pa.
Union Brass Mfg. Co., 115 B'way, N. Y.; Chicago, Ill.
White, Edward, C., 531 W. 33d st., N. Y.

Trimmings (Car)—Nickel.

Oneida Community, Niagara Falls, N. Y.

Trimmings—Car Lamp.

Adams & Westlake Co. (The), 110 Ontario st., Chicago, Ill.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bridgeport Brass Co., 19 Murray st., N. Y.
Bristol Brass & Clock Co., 32 Warren st., N. Y.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Post & Co., Cincinnati, O.
Scoville Mfg. Co., Waterbury, Conn.
Smith, Josephine D., 352 Pearl st., N. Y.

Trimmings—Engine.

Greeley, E. S., & Co., 5-7 Dey st., N. Y.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.
Worswick Mfg. Co. (The), 101 Water st., Cleveland, O.

Trowels.

Briggs Iron & Tool Co., Findlay, O.
Henry, John T., Hamden, Conn.
Johnson, Wm., Newark, N. J.
Knapp & Cowles Mfg. Co. (The), Bridgeport, Conn.
Pearce, Harvey W., Co. (The), Bridgeport, Conn.
Price, M., 338 Mulbery st., Newark, N. J.
Rose, Wm., & Bro., 3537 Filbert st., Phila., Pa.
Shepard Hardware Co., Buffalo, N. Y.

Trucks—Baggage.

Blasi, John N., 54 W. B'dway, N. Y.
Boston & Lockport Block Co., 162 Commercial st., Boston, Mass. **90.**
Byram & Co., 435 Guoin st., Detroit, Mich.
Clark, Joshua M., Howell, Mich.
Custer Beam Works, Marshall and Diamond sts., Phila., Pa.
Howe Scale Co., Rutland, Vt.
Kalamazoo Railroad Velocipede Co., Kalamazoo, Mich.
Kilbourne & Jacobs Mfg. Co. (The), 22 E. Broad st., Columbus, O. **2.**
Lansing Wheelbarrow Co., Lansing, Mich
Spencer, G. H., & Co., 819-821 W. Lake st., Chicago, Ill.

Trucks—Car.

Central Support Car Truck Co., 221 Oliver st., St. Louis, Mo.
Davis, S., Montreal, Canada.
Detroit Car Truck Co., 11 Rowland st., Detroit, Mich.
Goettel, John, 33 North st., Boston, Mass.
Ramapo Iron Works, Hillburn, N. Y.
Ramapo Wheel & Foundry Co., Ramapo, N. Y.
Sisum, W. H. H., 225 State st., Brooklyn, N. Y.
Suspension Car Truck Mfg. Co., 11 Pine st., N. Y.

Trucks—Fire.

Allen & Co., 140 and 142 E. 41st st., N. Y.
Horton & Co., 53-59 E. 5th st., Cincinnati, O.

Steel Nosed R. R. & S. S. Trucks.

Lansing Wheelbarrow Co., Lansing, Mich.

Trucks—Tramway.

Broadway Mfg. Co., Broadway, Va.

Truck Sides—Bent.

Logan Iron & Steel Co., 218 S. 4th st., Phila., Pa.

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***Tube Scrapers.**

Chalmers, Spence Co., 419 8th st., N. Y. iv.

Tubes—Brass & Copper.

American Tube Works, 97 State st., Boston, Mass.
American Tube Works, 88 E. Lake st., Chicago, Ill.
Ansonia Brass & Copper Co., Ansonia, Conn.; 19 Cliff st., N. Y.; 64 E. Washington st., Chicago, Ill.
Bailey, Wm. H., 20 Gold st., N. Y.
Benedict & Burnham Mfg. Co., 13 Murray st., N. Y.; 24 Oliver st., Boston, Mass.; 17 N. 7th st., Phila., Pa.; Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.; 19 Murray st., N. Y.
Bridgeport Iron Co., 73 Pearl st., N. Y.
Bridgewater Iron Co., Bridgewater, Mass.
Brown & Bros. Tubing & Boiler Works, Waterbury, Conn.
Deakin, R. T., & Co., 500 N. 12th st., Phila., Pa.
Donegan & Reilly, 229 West st., N. Y.
Elliott, Wm., 53 Fulton st., N. Y.
Fearing, Wm. S., 100 Chambers st., N. Y.
Griggs, E. D., 63 Duane st., N. Y.
Holmes, Booth & Haydens, Waterbury, Conn.
Knapp, John H., 17 John st., N. Y.
Lawson, F. H., & Co., 188-190 Main st., Cincinnati, O.
McNab & Harlan Mfg. Co., 55 John st., N. Y.
Manhattan Brass Co., 475 First av., N. Y.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Osborne & Cheeseman Co., Ansonia, Conn.
Plume & Atwood Mfg. Co. (The), 18 Murray st., N. Y.; Waterbury, Conn.
Randolph & Clowes, Waterbury, Conn.
Reilly, James, 230 West st., N. Y.
Rome Brass & Copper Mills, Rome, N. Y.
Scovill Mfg. Co., Waterbury, Conn.; 123 Broome st., N. Y.
Soltmann, E. G., 119 Fulton st., N. Y.
Taylor, Chas. F., Providence, R. I.
Wallace & Sons, 89 Chambers st., N. Y.
Waterbury Brass Co., 296 B'way, N. Y.; Waterbury, Conn.
Williams, E. A., & Son, 107 Plymouth st., Jersey City, N. J. x.

Tubes—Bronze Brazed.

Ansonia Brass & Copper Co., 19 Cliff st., N. Y.

Tubes—Boiler.

Abendroth & Root, 28 Cliff st., N. Y. iii.
Allison Mfg. Co., 32d & Walnut sts., Phila., Pa.
Am. Tube Works, 20 Gold st., N. Y.; 97 State st., Boston, Mass.
Am. Tube & Iron Co., 98 John st., N. Y.
Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.
Bailey, Wm. H., 20 Gold st., N. Y.
Barr, Edw. Co. (Ltd.), 78 John st., N. Y.
Byers, A. M. & Co., 98 Water st., Pittsburgh, Pa.
Carmichael & Emmens, 130 Cedar st., N. Y.
Clow, James B. & Son, 214 Lake st., Chicago, Ill.
Coatesville Iron Works, 26 W. Lake st., Chicago, Ill.
Condit, Fuller & Co., Cleveland, O.
Cooper, C. & G. & Co., Mt. Vernon, O. 58.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Crescent Mfg. Co., 315 Michigan st., Cleveland, Ohio.
Deleware Iron Co., 222-224 S. 3d st., Phila., Pa.
Donegan & Swift, 174 Fulton st., N. Y.
Downing, J. M., New Castle, Pa.
Dudgeon, Richard, 24 Columbia st., N. Y.
Duquesne Tube Works Co., 99 Water st., Pittsburgh, Pa.
Eagle Tube Co., 614-626 W. 24th st., N. Y.
Froment, F. L., 112 John st., N. Y.
Fuller, Dana & Fitz, 110 North st., Boston, Mass.
Gibbs, G. W. & Co., 35 Fremont st., San Francisco, Cal.
Keating, E. F., 102 John st., N. Y.
Keefer, Horace A. & Co., Kansas City, Mo. 88.
Lane, W. E., 505 Kearney st., San Francisco, Cal.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Mallory, W. S. & Co., 10-16 W. Randolph st., Chicago, Ill.
Morris Tasker Co., Phila., Pa.
National Tube Works Co., 70 Federal st., Boston, Mass.; 104 John st., N. Y.; N. Clinton, c. Fulton st., Chicago, Ill.
Pancoast & Rogers, 28 Platt st., N. Y.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Selby, T. H. & Co., 220 Mission st., San Francisco, Cal.
Star Steam Heater Co., Market & Main sts., Mt. Joy, Pa.; 77 Malden la., N. Y. 57.
Syracuse Tube Co., Syracuse, N. Y.
Tyler Bros., 80 Oliver st., Boston, Mass.
Tyler Tube Mill, 12-14 Cliff st., N. Y.
Warren, Andrew, 707 N. 2d st., St. Louis, Mo.
Wilder, G. G., Jr., 70 Kilby st., Boston, Mass.
Woltman, G., St. Louis, Mo.
Worswick Mfg. Co. (The), 101 Water st., Cleveland, O.

Tubes—Corrugated.

Walnwright Mfg. Co. (The), 67 Oliver st., Boston, Mass.

Tubes—Flexible.

Am. Tubing & Mfg. Co., Providence, R. I.
Atlantic Mfg. Co., Providence, R. I.
National Tubing Co., Providence, R. I.
Nicholls, M. M., 369 W. 11th st., N. Y

Tubes—Gas.

American Tubing & Mfg. Co., 25 Calendar st., Providence, R. I.
American Tube Works, 88 Lake st., Chicago, Ill.
Combination Roll & Rubber Co., 38 Park Row, N. Y.
Cumberland Nail & Iron Co., Bridgeton, N.J.; 43 N. Water st., Phila., Pa.
Lake Erie Boiler Works, 244 Perry st., Buffalo, N. Y.
Nicholls, Mark M., 367-369 W. 11th st., N. Y.
Swampscott Machine Co., South New Market, N. H.
Union Tubing Co., 487 Broadway, N. Y.
Walworth Mfg. Co., 14-20 Oliver st., Boston, Mass.

Tubes—Iron.

Allison Mfg. Co. (The), S. 32d, c. Walnut st., Phila., Pa.
American Tube Works of Boston, 400 Locust st., Phila., Pa.; 97 State st., Boston, Mass.
American Tube & Iron Co., 98 John st., N. Y.; 19 Pearl st., Boston, Mass.; 3 Smithfield st., Pittsburgh, Pa.
American Tubing & Mfg. Co., 25 Calendar st., Providence, R. I.
Ansonia Brass & Copper Co., 21 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., 13 Murray st., N. Y.; 17 N. 7th st., Phila., Pa.; Waterbury, Conn.
Boston Spiral Tube Works, Cambridgeport, Mass.
Boston Woven Hose Co., 234 Devonshire st. Boston, Mass.
Bridgeport Brass Co., 19 Murray st., N. Y.
Brown & Bros. Tubing & Boiler Works, Waterbury, Conn.
Byers, A. M., & Co., Pittsburgh, Pa.
Camden Tool & Tube Works, Camden, N. J.
Chester Pipe & Tube Co., 261 S. 4th st., Phila., Pa.

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Clark, J. M., 533-537 Pearl st., N. Y.
Continental Tube Works, Pittsburgh, Pa.
Delaware Iron Co., 222-224 S. 3d st., Phila., Pa.
Duquesne Tube Works Co., 99 Waterst., Pittsburgh, Pa.
Eagle Rolling Mill & Tube Works (J. W. Friend & Co.), Pittsburgh, Pa.
Froelich Bros, 27 N. 7th st., Phila., Pa.
Holmes, Booth & Hardens, 25 Park pl., N. Y.; Waterbury, Conn.
Justice & Co., Philip S., 14 N. 5th st., Phila, Pa.
Ruffner, Dunn & Co., n. R. R. & Bowman Falls, Phila., Pa.
Scovill Mfg. Co., 423 Broome st., N. Y.
Spofford, W. S., 42 Point st., Providence, R. I.
Syracuse Tube Co., 61 Kilby st., Boston, Mass.
Tyler Tube Mill, 12-14 Cliff st., N. Y.; 8 Oliver st., N. Y.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
National Tubing Co., 282 Dyer st., Providence, R. I.
National Tube Works Co., 104 John st., N. Y.; 70 Federal st., Boston, Mass.; Smithfield, c. Water st., Pittsburgh, Pa.
Penna. Tube Works, 165 1st av., Pittsburgh, Pa.
Plume & Atwood Mfg. Co., 18 Murray st., N. Y.
Pittsburgh Tube Co., Pittsburgh, Pa.
Universal Rubber Co. (The), 45-51 Rose st., N. Y.
Wainright Mfg. Co., 65 Oliver st., Boston, Mass.; 93 Liberty st., N. Y.
Wallace & Sons, 89 Chambers st., N. Y.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Wilmot & Hobbs Mfg. Co. (The), Railroad av., c. Hancock av., Bridgeport, Conn.

Tubes—Locomotive Boiler.

Allison Mfg. Co. (The), Philadelphia, Pa.
American Tube Works, 88 Lake st., Chicago, Ill.
National Tube Works Co., 70 Federal st., Boston, Mass.
Woltman, G., 5 N. 2d st., St. Louis, Mo.

Tubes—Pneumatic.

American Tube Works, 88 Lake st., Chicago, Ill.

Tubes—Submarine.

Submarine Tunnel & Tube Co., 95 Liberty st., N. Y.

Tubes—Steel.

Justice, Philip S., & Co., 14 N. 5th st., Phila., Pa.
Leng, John L., 4 Fletcher st., N. Y.
Riverside Iron Works, Wheeling, W. Va.

Tubes—Wrought Iron.

Pittsburgh Tube Co., 2d av., Pittsburgh, Pa.
Reading Iron Works, 259 S. 4th st., Phila., Pa.
Riverside Iron Works, Wheeling, W. Va.

Tubes—Well.

Andrews, Wm. D., & Bro., 233 Broadway, N. Y.
American Tube Works, 88 Lake st., Chicago, Ill.
Brockett, C. A., 800 Delaware st., Kansas City, Mo. 69.
Iowa Pipe & Tile Co., Des Moines, Iowa.
Walker, N. U., Clay Mfg. Co., Walkers, O.

Tubes—Zinc.

Benedict & Burnham Mfg. Co., Waterbury, Conn.
Brown & Bros, Tubing & Boiler Works (The), Waterbury, Conn.
Plume & Atwood Mfg. Co. (The), 18 Murray st., N. Y.

Tube Expanders.

McCoy & Sanders, 26 Warren st., N. Y.

Tubs—Coal.

Hunt & Co., C. W., 111 Broadway, N. Y.
Steubner & Wood, 168 E. 3d st., L. I. City, N. Y.

Tugs, Boats and Lighters.

Baker Whiteley Coal Co., 5 Rialto Bldg., Baltimore, Md.
Baltimore Storage & Lighterage Co., 5 Rialto Bldg., Baltimore, Md.
Chesapeake Towing Co., 5 Rialto Bldg., Baltimore, Md.
Tebo, Wm. M., 23 South st., N. Y.

Turnbuckles.

American Bolt Co., 270 Lawrence st., Lowell, Mass. 24.
Cleveland City Forge & Iron Co., Cleveland, Ohio.
Merrill Bros., Brooklyn. E. D., N. Y.
Pennsylvania Bolt & Mfg. Co., Lebanon, Pa.

Turn-Tables—R. R.

Andrews, Frank H., 545 W. 33d st., N. Y.
Atlanta Bridge & Axle Co., Atlanta, Ga.
Birmingham Bridge Co., Birmingham, Ala.
Boston Bridge Works, 70 Kilby st., Boston, Mass.
Bowler & Co., 10-24 Winter st., Cleveland, O.
Carroll, D. W. C., & Co. (Ltd.), 310 Liberty st., Pittsburgh, Pa.
Cartter, M. S. & Co., B'way and Locust st., St. Louis, Mo.
Chester Steel Castings Co., 407 Library st., Phila., Pa. 46.
Chicago Forge & Bolt Co., 234 Clark st., Chicago, Ill.
Cleveland Wheel & Foundry Co., Cleveland, Ohio.
Columbia Bridge Co., Louie st., Dayton, O.
Detroit Bridge & Iron Works, Detroit, Mich.
Dominion Bridge Co. (Ltd.), Lachine, P. Q.; Toronto, Ont.
Edgemoor Iron Co., Wilmington, Del.; 1600 Hamilton st., Phila., Pa.
Excelsior Iron Works Co., Cleveland, O.
Frelton Foundry, 22 Merwin st., Cleveland, O.
Hawkins, R. F., Iron Works, 200 Liberty st., Springfield, Mass.
Industrial Works, Bay City, Mich.
Iron City Bridge Works, Pittsburgh, Pa.
Jersey City Iron Works, 587 Henderson st., Jersey City, N. J.
Jordan, F. 200 B'way, N. Y.
Keystone Bridge Co., 51st st. and A. V. R. R., Pittsburgh, Pa.
King Iron Bridge & Mfg. Co., Cleveland, O.
Louisville Bridge & Iron Co., Louisville, Ky.
MacCormack, J., Old Stone Mill, Albany, N. Y.
Massillon Bridge Co., Massillon O.
Missouri Valley Bridge & Iron Works, Leavenworth, Kan.
Niagara Bridge Works, Buffalo, N. Y.
Pardee Car Works Watsontown, Pa.
Passaic Rolling Mills, Paterson, N. J.; 45 B'way, N. Y.
Paul, Geo. K., & Co., 98 Milk st., Boston, Mass.
Pearce & Jones, 79 John st., N. Y.
Pencoyd Iron Works (A. & P. Roberts & Co.), 261 S. 4th st., Phila., Pa.
Penn Bridge Co., Beaver Falls, Pa.
Philadelphia Bridge Works (The), 257 S. 4th st., Phila., Pa.
Phœnixville Bridge Works, 49 William st., N. Y.; 410 Walnut st., Phila., Pa.; Phœnixville, Pa.
Pittsburgh Bridge Co. (The), 36th st., Pittsburgh, Pa.
Rochester Bridge & Iron Works, Rochester, N. Y.
Sellers, Wm., & Co. (Inc.), Phila., Pa.
Shiffler Bridge Works (The), 47th st. & A. V. Ry., Pittsburgh, Pa.

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Snead & Bibb, Louisville, Ky.
Swampscott Machine Co., S. New Market, N.H.
Vermont Construction Co. (The), St. Albans, Vt.
Wallis Iron Works (The), 7-15 Morris st., Jersey City, N. J.
Way, Rhodes & Blankley, 53d and Wood sts., Phila., Pa.
Wilkins, Post & Co., 102 B'way, N. Y.

Turn-Tables—Street R. R.

Andrews, Frank H., 545 W. 33d st., N. Y.
Ayres, Abraham, 502-518 W. 45th st., N. Y.
Brill, J. G. Co., Phila., Pa.
Craig, W. P., 95 Liberty st., N. Y.
Dower & Dutton, 14 Winter st., Cleveland, O.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, Cleveland, O.
Greeley, E. S., & Co. (The), 5-7 Dey st., N. Y.
Haines Bros., 55 B'way, N. Y.
Hathaway & Robison, 14 Case Bldg., Cleveland, O.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Johnson Steel Street Rail Co. (The), Johnstown, Pa. **55.**
Kœstner, Chas., & Co., 303 S. Canal st., Chicago, Ill.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Martin, Rufus, & Co., 114 Nassau st., N. Y. **52.**
Metallic Street Railway Supply Co., Albany, N. Y.
Pugh & Russell, Stewart Bldg., N. Y.
Snead & Bibb, Louisville, Ky.
Street Railway Supply Co., Cleveland, O.
Wm Wharton, Jr., & Co. (Inc.), 25th st. and Washington av., Phila., Pa.

Turn-Outs.

Andrews, Frank H., 545 W. 33d st., N. Y.
Craig, Wm. P., 95 Liberty st., N. Y.
Cleveland Wheel & Foundry Works, 20 Carter st., Cleveland, O.
Dederick, Z. P., Sherman, Texas.
Fulton Foundry, Cleveland, O.
Haines Bros., 55 B'way, N. Y.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Johnson Steel Street Rail Co., Johnstown, Pa. **55.**
Lewis & Fowler Mfg. Co., 27-35 Walworth st., Brooklyn, N. Y.
Metallic Street Railway Supply Co., Albany, N. Y.
Meyseuburg, O. W., & Co., 204 N. 3d st., St. Louis, Mo.
Pugh & Russell, Stewart Bldg., N. Y.
St. Thomas Car Wheel Co., St. Thomas, Ont., Canada.
Street Railway Supply Co., Cleveland, O.
Way Foundry Co. (The), 23d & Wood sts., Philadelphia, Pa.
Wm. Wharton, Jr., & Co. (Inc.), 25th st. & Washington av., Phila., Pa.

Tuyeres.

Atlas Bronze & Tuyere Co. (Ltd.), 2829 Smallman st., Pittsburgh, Pa.
Atwood & McCaffrey, 50 3d av., Pittsburgh, Pa.
Keystone Smelting Co., 33d & A. V. R. R., Pittsburgh, Pa.
Kier Bros., Salina, Pa.
Marshall Bros., 69 Diamond st., Pittsburgh, Pa.
Philadelphia Smelting Works, 455-457 N. 12th st., Philadelphia, Pa.
Parker, Russell Mining & Mfg. Co., 711 Pine st., St. Louis, Mo.

Twist Drills.

Cincinnati Screw & Tap Co. (The), 2d & Plum sts., Cincinnati, O.
Cleveland Twist Drill Co., 24 West st., Cleveland, O. **24.**
Cox & Prentiss, Cleveland, O.
Leroy, J. Pine Co. (The), 550-554 Fulton st., Troy, N. Y.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Manning, Maxwell & Moore, 111 Liberty st., N. Y.
Morse Twist Drill & Machine Co., New Bedford, Mass.
New Process Twist Drill Co., Taunton, Mass.
Parke & Lacy, 8 California st., San Francisco, Cal.
Rockford Twist Drill & Bit Co., Rockford, Ill.
Standard Tool Co., Bond, c. Rockwell st., Cleveland, O.; 33 Chambers st., N. Y. **49.**
Star Tool Co. (The), Beverly, c. Mason st., Providence, R. I.
Syracuse Twist Drill Co., Syracuse, N. Y.
Union Twist Drill Co., 96½ Summer st., Boston, Mass.
United States Twist Drill Co., Providence, R. I.
Van Hoagen Twist Drill Co., Collegeville, Pa.
Williams Mfg. Corporation, New Bedford, Mass.

Typewriters.

American Writing Machine Co., 237 B'way, N. Y. **40.**
Ayres, C. N., Co., 28 Bagley av., Detroit, Mich.
Barron, W. J., 200 Broadway, N. Y.
Becker, George, & Co., 30 Gt. Jones st., N. Y.
Becker, John, 50 Hartford st., Boston, Mass.
Bishop, E. F., 108 Griswold st., Detroit, Mich.
Boston Typewriter Co. (The), 186 Washington st., Boston, Mass.
Burridge, L. S., 319 Broadway, N. Y.
Columbia Mfg. Co., 129 Crosby st., N. Y.
Crandall Typewriter Co., Leavenworth st., Syracuse, N. Y.
Crown Typewriter Mfg. Co., Albany, N. Y.
Garvin, E. E., & Co., 139-143 Centre st., N. Y.
Good Cheer Typewriter Co., Greenfield, Mass.
Gorman & Losch, 79 Cedar st., N. Y.
Hall, F., 853 Broadway, N. Y.
Hall Typewriter Co., Salem, Mass.
Hammond Typewriter Co., 75-77 Nassau st.; 292 Av. B, N. Y. **36 & 37.**
Harrington & Millison, Wichita, Kan.
Harrison Typewriter Co., Anderson, Ind.
Hoggson & Pettis Mfg. Co., 64 Court st., New Haven, Conn.
Horton Typewriter Co., 436 Niagara st., Buffalo, N. Y.
Houchi..., A. W., 11 Vine st., B'klyn, N. Y.
Oren & Chase, 113 N. Charles st., Balto., Md.
Parish Mfg. Co., Parish, N. Y.
Payne & Pratt, 117 Public sq., Cleveland, O.
Remington, E., & Son, Ilion, N. Y.
Standard Type Writing Mfg. Co., Ilion, N. Y.
Sun Typewriter Co., 319 B'way, N. Y.
Thorpe, W. A., & Co., 58 Griswold st., Detroit, Mich.
Underhill, E. B., Jr., 7 W. B'way, N. Y.
U. S. Stenograph Co., 402 N. 3d st., St. Louis, Mo.
Weed Sewing Machine Co., Hartford, Conn.
Williams, E. S., 18 W. 23d st., N. Y.
World Typewriter, 50 Hartford st., Boston, Mass.; 4-6 W. 14th st., N. Y.
Writing Machine Mfg. Co., 96 B'way, N. Y.
Wyckoff, Seamans & Benedict, 339 B'way, N. Y. **42 & 43.**

Typewriters' Supplies, Paper, Carbon and Ribbons.

Acton John, Franklin & Centre sts., N. Y.
American Typewriter Co., 237 B'way, N. Y. **40.**
Hammond Typewriter Co., 77 Nassau st., N. Y. **36 & 37.**
Rogers, L. H., 75 Maiden Lane, N. Y.
Smith, S. T., 14 Park Place, N. Y.
Underwood, John & Co., 30 Vesey st., N. Y.
Wyckoff, Seamans & Benedict, 339 B'way, N. Y. **42 & 43.**

Uniforms—R. R. & S. S.

Ferriss, L. L., & Co., Decatur, Ill.
French, S. A., 400 Broome st., N. Y. **65.**

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Lilley, M. C., & Co., Columbus, O.
Stadler, Max & Co., 461 B'way, N. Y.

Uniform Hats, Caps and Buttons.

Armstrong, E. A., 210 Jefferson st., Detroit, Mich.
Banta, G. W., 361 Canal st., N. Y.
Combination Button Co., c. Hudson & Harrison sts., N. Y.
Corcoran, John, 410 Lorimer st., Denver, Col.
Hart & Duff Hat Co., 113 N. B'way, St. Louis, Mo.
Hoole Mfg. Co., 46 Bond st., N. Y.
Horstmann Bros. & Co., 5th & Cherry sts., Phila., Pa.
Rundy & Son, 190 S. Clark st., Chicago, Ill.
Scovill Mfg. Co., Waterbury, Conn.; 123 Broome st., N. Y.
Union Brass Mfg. Co, Chicago, Ill.
Waterbury Button Co., 48 Howard st., N. Y. Waterbury, Conn.

Upholstery, Mats, Etc.

Beadle, Edward, 1193 B'way, N. Y. **73.**
Everit, W. L., New Haven, Conn.
Goff, D. & Sons, Pawtucket, R. I.
Gould, J. H., & Gould & Co., Phila., Pa.
Hale & Kilburn Mfg. Co. (The), 48 and 50 N. 6th st., Phila, Pa.
Hartford Woven Wire Mattress Co. (The), P. O. Box 363, Hartford, Conn.
Lynn & Pettit, 707 Market st., Phila, Pa.
Rubelmann-Lucas Hardware Co., 1939 N. B'way, St. Louis, Mo.
Warneck & Toffler, 211 E. 22d st., N. Y.

Urinals

Conant Rubber Co., 26 & 28 Asylum st., Hartford, Conn.
Davol Rubber Co., 16 Point st., Providence, R. I.
Goldsbury, R., & Son, 318 E. 23d st., N. Y.
Goodyear's India Rubber Glove Mfg. Co., 503 and 505 Broadway, N. Y.
Hartford Glass Water Closet Co, Hartford, Conn.
Hazard Slate Co., Fair Haven, Vt.
Novelty Iron Works, 3124 Market st., Phila., Pa.
Standard Mfg. Co., 541 Wood st., Pittsburgh, Pa.

Vacuum Pans.

Deeley, Robert, & Co., ft. W. 32d st., N. Y.
Knowles, Frederick C., & Co., 33-35 Desbrosses st., N. Y.
Ott, George F., 207-213 Buttonwood st., Phila., Pa.
Wasel, Chris., & Co., 50-52 N. 3d st., Brooklyn, E. D., N. Y.

Valve Balls.

Akron Rubber Co., Akron, O.
N. Y. Belting & Packing Co., 13 Park Row, N. Y. **v.**
Star Rubber Co., Trenton, N. J.

Valves.

Acme Valve Co., Haverhill, Mass.
Albany Steam Trap Co., 78 and 80 Church st., Albany, N. Y.
American Meter Co., 521 W. 22d st., N. Y.
American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Arthur Co. (The), 86 John st., N. Y.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.; 42 Oliver st., Boston, Mass.
Ashton Valve Co., 108 5th av., Chicago, Ill.; 271 Franklin st., Boston, Mass.
Atwood & McCaffrey, 60 3d av., Pittsburgh, Pa.
Automatic Valve & Engine Co., 34 & 36 W. Morrow st., Chicago, Ill.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Balance Valve Co., 65 S. Canal st., Chicago, Ill.
Balance Valve & Steam Piston Co., 237 B'way, N. Y.
Belfield, H., & Co., 435 N. Broad st., Phila., Pa.
Belknap Mfg. Co., Bridgeport, Conn.
Benton & King Co., 86 John st., N. Y.
Birkett, James W., 67 Smith st., Brooklyn, E. D., N. Y.
Blackburn Valve Co., 370 Atlantic av., Boston, Mass.
Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Boston Machine Mfg. Co., Granite, c. 1st st., Boston, Mass.
Boston Woven Hose Co., 234 Devonshire st., Boston, Mass.
Braman, Dow & Co., 3-6 Haymarket st., Boston, Mass.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Cadman, A. W., & Co., 63 Water st., Pittsburgh, Pa.
Campbell, W. W., 85 Liberty st., N. Y.
Case & Baillie, 193 Atwater st., Detroit, Mich.
Chaplin, Fulton & Co. (Ltd.), 91 1st av., Pittsburgh, Pa.
Chapman Valve Mfg. Co., 72 Kilby st., Boston, Mass.
Chicago Rubber Works, Chicago, Ill.
Clark, Minford S., 124 Baxter st., N. Y.
Coffin Valve Co., 295 South st., Boston, Mass.
Combination Gas Machine Co. (The), 67 Dearborn st., Chicago, Ill.
Combination Roll & Rubber Co., 38 Park Row, N. Y.
Consolidated Safety Valve Co., 111 Liberty st., N. Y.
Continental Iron Works, Brooklyn, N. Y.
Cook & Co., 22 Cortlandt st., N. Y.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.
Crosby Steam Gage & Valve Co., 95 Oliver st., Boston, Mass.
Curran & Wolff, Chicago, Ill.
Curtis Regulator Co. (The), 63 Beverly st., Boston, Mass. **30.**
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **ii.**
D'Este & Co., 59 Beverly st., Boston, Mass.
Dickson Mfg. Co., Scranton, Pa.
Dopp, H. Wm., 462 Ellicott st., Buffalo, N. Y.
Drummond, M. J., 95 Liberty st., N. Y.
Eaton, Cole & Burnham Co., 82 Fulton st., N. Y.; Bridgeport, Conn.
Eddy Valve Co. (The), Waterford, N. Y.
Emory, P. P. & Co., 48 Hampden st., Springfield, Mass.
Evans, Joseph, 64 High st., Newark, N. J.
Fairbanks & Co., 26 S. Meridian st., Indianapolis, Ind.
Fairbanks, Morse & Co., Lake & La Salle sts., Chicago, Ill.
Fieldhouse & Dutcher Mfg. Co., 32 W. Monroe st., Chicago, Ill.
Flower, James & Bros., 30 Brush st., Detroit, Mich.
Floyd, Jas. R., 531 W. 20th st., N. Y.
Forest City Brass Works (The), 40 44 Leonard st, Cleveland, O.
Fort Wayne Safety Valve Works, Fort Wayne, Ind.
Frisbie, H. F., 43-45 Water st., Cincinnati, O.
Frontier Iron & Brass Works, Atwater, c. Chene st, Detroit, Mich.
Fullmer, A. J., & Co., Camden, N. J.
Galvin Brass & Iron Works, 35 5th av., Chicago, Ill.; Warren av. n. Grand River av., Detroit, Mich.
Garrett, W. T., & Co., Fremont st., San Francisco, Cal.
Gilchrist & Gorham, 207 Congress st., Boston, Mass.
Glenn, J. S., 115 Fremont st., Chicago, Ill.
Gloucester Iron Works, 6 N. 7th st., Phila., Pa.
Gold, Edw. E., & Co., c. Frankfort & Cliff sts., N. Y.
Goldsmith Valve Co., 90 John st., N. Y.

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Green, W. H., Chester, Pa.
Griffing Iron Works (A. A.), 449 Comm. av., Jersey City, N. J. **78.**
Gutta Percha & Rubber Mfg. Co., c. Warren & Church sts., N. Y.; 159 Lake st., Chicago, Ill.
Hamilton Rubber Co., 131 Lake st., Chicago, Ill.; Trenton, N. J.
Hardwicke & Ware, Buffalo, N. Y.
Haxtun Steam Heater Co., Kewanee, Ill.
Hewlings, A. J., 108 5th av., Chicago, Ill.
Holland & Thompson, 217 River st., Troy, N. Y.
Holt, Geo. F., 77 Haverhill st., Boston, Mass.
Home Rubber Co., Trenton, N. J.
Hoole Mfg. Co., 46 Bond st., N. Y.
Hoppe, Paul F., 107 Liberty st., N. Y.
Humphreys, W., Waterford, N. Y.
Hutchinson, J. R., 105 Sandusky st., Alleghney, Pa.
James, C. E., & Co., 103 E. 8th st., Chattanooga, Tenn.
Jarecki Mfg. Co., Erie, Pa.
Jenkins Bros., 54 Dearborn st., Chicago, Ill.; 105 Milk st., Boston, Mass., 71 John st., N. Y.
Jonson Foundry & Machine Co., 541 E. 118th st., N. Y.
Jost, E., 320 Market st., Newark, N. J.
Kelly & Jones Co., 75 John st., N. Y.
Kennedy, Daniel, 4 Gold st., N. Y.; 52 Cliff st., N. Y.
Kerr, Murray, Mfg. Co., Fort Wayne, Ind.
Kicley, T., 11 W. 13th st., N. Y.
Kirkup, Wm., & Son., Ludlow st., Cleveland, Ohio.
Knowles Steam Pump Works, 93 Liberty st., N. Y.
Kunkle, E. B., & Co., Fort Wayne, Ind.
Lambertville Iron Works, Lambertville, N. J.
Lathrop Co., 82 John st., N. Y.
Laws, A. D., Bridgeport, Conn.
Leng, John S., 4 Fletcher st., N. Y.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Locke Bros., 17 St. Peters st, Salem, Mass.
Lonergan, J. E., & Co., 211 Race st., Philadelphia, Pa.
Losee & Johnson, 297 W. 4th st., Cincinnati, O.
Ludlow Valve Co., 938 River st., Troy, N. Y.
McGill, Manchester & Co. (Ltd.), Pittsburgh, Pa.
McKay Mfg. & Co., 29th & Liberty sts., Pittsburgh, Pa.
McManu, T. R., & Bro., 56 Gold st., N. Y.
McNab & Harlan Mfg. Co., 56 John st., N. Y.
Maneely, John, 119 N. 4th st., Phila., Pa.
Mansfield & Co. (Ltd.), 57 1st. av., Pittsburgh, Pa.
Marsh, Jas. P., & Co., 224 Washington st., Chicago, Ill.
Mason Regulator Co., 22 Central st., Boston, Mass.; 115 Liberty st., N. Y. **22.**
Mellert Foundry & Machine Co. (Ltd.), Reading, Pa.
Mohawk & Hudson Mfg. Co. Waterford, N. Y.
Morris, Tasker & Co., 222-224 S. 3d st., Phila., Pa.
Morrison, David, 55 W. 16th st., N. Y.
Morton Valve Co., Romeo, Mich.
Murdock Valve Co., 118 Congress st., w., Detroit, Mich.
Nason Mfg. Co., 71 Beekman st., N. Y.
National Boiler Works, Bay City, Mich.
National Mfg. Co., 92 Liberty st., N. Y.
Nathan Mfg. Co., 94 Liberty st., N. Y.
New Haven Automatic Sprinkler Co., New Haven, Conn.
N. Y. Belting & Packing Co., 15 Park Row, N. Y.
Orbitts & Willett, 229 Michigan av., Detroit, Mich.
Pancoast & Rogers, 28 Platt st., N. Y.
Pattel & Draper, Holyoke, Mass.
Paul, Geo. K., & Co., 98 Milk st., Boston, Mass.
Peet Valve Co., 163 Albany st., Boston, Mass.
Poage, John N., Court & Harrilt sts., Cincinnati, O.
Portsmouth Machine Co., Portsmouth, N. H.
Powell, William Co. (The), 50 Plum st., Cincinnati, O.
Pratt & Cady, Capitol av., c. Sigourney st., Hartford, Conn.
Price, Wm. S., & Co., 33 Wood st., Pittsburgh, Pa.
Pulsometer Steam Pump Co., 83 John st., N. Y.
Reaser Balance Valve Mfg. Co., 56 S. Clinton st., Chicago, Ill.
Rensselaer Mfg. Co., 4th av., c. 12th st., Lansingburgh, N. Y.
Roots, P. H., & F. M., Connersville, Ind.
Ross Valve Co., 654 River st., Troy, N. Y.
Rouse, R. R., Indianapolis, Ind.
Royle, John, & Sons, Railroad av., c. Grand st., Paterson, N. J.
Sandwich Enterprise Co., Sandwich, Ill.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Ship Suction Valve Mfg. Co., 6 Reade st., N. Y.
Smith, H. B. Co. (The), 137 Centre st., N. Y.
Smith & Sayre Mfg. Co., 245 B'way, N. Y.
Specialty Mfg. Co., Frazier, n. Gas Works, Allegheny, Pa.
Springfield Brass Co. (The), 80-84 S. Limestone st., Springfield, O.
Star Steam Heater Co., Market & Main sts., Mt. Joy, Pa.; 77 Malden la., N. Y. **57.**
Steel Pulley & Machine Works, Indianapolis, Ind.
Stone, Fred, & Co., 62 Gold st., N. Y.
Stout, S., 227 Main st., Cincinnati, O.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.
Sumner & Goodwin, 19 Oliver st., Boston, Mass.
Taws & Hartman, 1233-1237 N. Front st., Phila., Pa.
Trenton Rubber Co., Trenton, N. J.
Trout, H. G., & C., 226 Ohio st., Buffalo, N. Y.
Union Brass Works, 50 Plum st., Cincinnati, Ohio.
Union Foundry & Machine Co. (Ltd.), 112 Water st., Pittsburgh, Pa.
Union Hydraulic Works, Germantown av. & 2d st., Phila., Pa.
Union Water Meter Co., Worcester, Mass.
United States Pump & Valve Co., 26-28 Oliver st., Boston, Mass.
Valve Attachment Co., Pittsburgh, Pa.
Walworth Mfg. Co., 14-20 Oliver st., Boston, Mass.
Watts, J. E., Lawrence, Mass.
Watson & McDaniel, 248 N. 8th st., Phila., Pa.; 44 N. 7th st. Phila., Pa.
Watson & Stillman, 204 E. 43d st., N. Y.
Wentworth Mfg. Co., 92 Pearl st., Boston, Mass.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.
Wilson-Snyder Mfg. Co., 51 Water st., Pittsburgh, Pa.
Wood, R. D., & Co., 400 Chestnut st., Phila., Pa.

Valves—Air.

Boston Brass Co., 42 Oliver st., Boston, Mass.
Davis, G. M., & Co., 20 S. Canal st., Chicago, Ill. **57.**
Eddy Valve Co. (The), Waterford, N. Y.
Gold, Edw. E., & Co., c. Frankfort and Cliff sts., N. Y.
Griffing, A. A., Iron Co., 449 Communipaw av., Jersey City, N. J. **78.**
Smith, H. B., Co. (The), 137 Centre st., N. Y.
Sturtevant, B. F., 115 Purchase st., Boston, Mass.

Valves—Automatic.

Whiting Mfg. Co., Cedar Rapids, Ia.

Valves—Back Pressure.

Ashton Valve Co. (The), 108 5th av., Chicago, Ill.; 271 Franklin st., Boston, Mass.
Kieley, Timothy, 11 W. 13th st., N. Y.
Pratt & Cady Co. (The), Hartford, Conn.

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Valves—Balance.

Frisbie, H. F., 43 and 45 Water st., Cincinnati, Ohio.

Valves—Blast.

Dickson Mfg. Co., Scranton, Pa.
Taws & Hartman, 1233-1237 N. Front st, Phila., Pa.

Valves—Boiler.

Ashton Valve Co. (The), 271 Franklin st., Boston, Mass.

Valves—Brass.

Belfield, H., & Co., 435 N. Broad st., Phila., Pa.
Benton & King Co., 86 John st., N. Y.
Crane Bros. Mfg. Co., 10 N. Jefferson st., Chicago, Ill.; 92 Liberty st., N. Y.
Eaton, Cole & Burnham Co. (The), 82 & 84 Fulton st., N. Y.
Green, W. H., Chester, Pa.
Harwicke & Ware, Buffalo, N. Y.
Haxtun Steam Heater Co., Kewanee, Ill.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.

Valves—Car Heating.

Chapman Valve Mfg. Co., Indian Orchard, Mass.

Valves—Check.

Albany Steam Trap Co. (The), 78 and 80 Church st., Albany, N. Y.
Boston Machine Mfg. Co., Granite, c. 1st st., S. Boston, Mass.
Fullmer, A. J., & Co., Camden, N. J.
Ludlow Valve Mfg. Co., Troy, N. Y.
Rouse, R. R., Indianapolis, Ind.
Wentworth Mfg. Co., 92 Pearl st., Boston, Mass.
Worthington, Henry R., 86 and 88 Liberty st., N. Y. **89.**

Valves—Cut-Off.

Automatic Valve & Engine Co., 34 and 36 W. Morrow st., Chicago, Ill.

Valves—Engine.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.

***Valves—Exhaust Relief.**

Knowles Steam Pump Works, 93 Liberty st., N. Y.

Valves—Gas.

Chapman Valve Mfg. Co., 72 Kilby st., Boston, Mass.
Curtis & Co., Cohoes, N. Y.
Eddy Valve Co. (The), Waterford, N. Y.
Ludlow Valve Mfg. Co., Troy, N. Y.
Peet Valve Co., 163 Albany st., Boston, Mass.
Roots, P. H. & F. M., Connersville, Ind.

Valves—Gate.

Albany Steam Trap Co., 78-80 Church st., Albany, N. Y.
Curtis & Co., Cohoes, N. Y.
Eddy Valve Co. (The), Waterford, N. Y.
Galvin Brass & Iron Works, Warren av. n. Grand River, Detroit, Mich.
Hutchinson, J. R., 105 Sandusky st., Allegheny, Pa.
Kennedy, Daniel, 4 Gold st., N. Y.
Mansfield & Co., 57 1st st., Pittsburgh, Pa.
Peet Valve Co, 163 Albany st., Boston, Mass.
Poage, John N., Court & Harriet sts., Cincinnati, O. **73.**
Rensselaer Mfg. Co., 4th av., c. 12th st., Lansingburgh, N. Y.

Valves—Globe.

Albany Steam Trap Co, 78 & 80 Church st., Albany, N. Y.
Braman, Dow & Co., 3-6 Haymarket sq., Boston, Mass
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Morrison, David, 55 W. 16th st., N. Y.
Orbitts & Willett, 229 Michigan av., Detroit, Mich.

Valves—Governor.

New Haven Automatic Sprinkler Co., New Haven, Conn.

Valves—Hydraulic.

Chapman Valve Mfg. Co., 72 Kilby st., Boston, Mass.
Consolidated Safety Valve Co. (The), 111 Liberty st., N. Y.
Curtis & Co., Cohoes, N. Y.
Davidson, M. T., Steam Pump Co., 77 Liberty st., N. Y. **11.**
Eddy Valve Co. (The), Waterford, N. Y.
Galvin Brass & Iron Works, 35 5th av., Chicago, Ill.
Glenn Valve Mfg. 115 Fremont st., Chicago, Ill. **9.**
Green, W. H., Chester, Pa.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Peet Valve Co., 163 Albany st., Boston, Mass.
Shaw, Thos., 915 Ridge av., Phila., Pa.
Wentworth Mfg. Co., 92 Pearl st., Boston, Mass.

Valves—Iron.

Belfield, H., & Co., 435 N. Broad st., Philadelphia., Pa.
Benton & King Co., 86 John st., N. Y.
Crane Bros., Mfg. Co., 10th. n. Jefferson st., Chicago, Ill.; 92 Liberty st., N. Y.
Green, W. H., Chester, Pa.

Valves—Locomotive.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashton Valve Co. (The), 271 Franklin st., Boston, Mass.
Consolidated Safety Valve Co. (The), 111 Liberty st., N. Y.

***Valves—Marine.**

American Steam Gauge Co., 36 Chardon st., Boston, Mass.

***Valves—Portable Engine.**

American Steam Gauge Co., 36 Chardon st., Boston, Mass.

***Valves—Pressure.**

Eclipse Mfg. Co., 125 S. Clinton st., Chicago, Ill.

Valves—Pump.

Boston Car Spring Co., 19 Pearl st., Boston, Mass.
Cleveland Rubber Co., C. & P & Nickel Plate R. R., Cleveland, O.
Home Rubber Co., Trenton, N. J.
Jenkins Bros., 71 John st., N. Y.
Revere Rubber Co., 64 Franklin st., Boston, Mass.
Rous, R. R., Indianapolis, Ind.
Star Rubber Co., Trenton, N. J.
Vulcanized Fibre Co., Wilmington, Del.; 14 Dey st., N. Y. **96.**

Valves—Quick Opening.

Rensselaer Mfg. Co., 4th av., c. 125th st., Lansingburgh, N. Y.

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Valves—Reducing.

Davis, G. M., & Co., 20 S. Canal st., Chicago, Ill.
Jenkins Bros., 71 John st., N. Y.
Mason Regulator Co., 22 Central av., Boston, Mass. **22.**

Valves—Regulating.

Acton, John, Franklin and Central sts., N. Y.
Ross Valve Co., Troy, N. Y.

Valves—Relief.

Ashton Valve Co. (The), 271 Franklin st., Boston, Mass.
Consolidated Safety Valve Co. (The), 111 Liberty st., N. Y.
Crosby Steam Gauge and Valve Co., 95-97 Oliver st., Boston, Mass.
Shaw, Thos., 915 Ridge av., Phila., Pa.

Valves—Rubber.

Boston Belting Co., 256-260 Devonshire st., Boston, Mass.
Chicago Rubber Works, Chicago, Ill.
Gutta Percha & Rubber Mfg. Co. (The), c. Warren and Church sts., N. Y.
N. Y. Belting & Packing Co., 15 Park Row, N. Y. **v.**

Valves—Safety.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Arthur Co. (The), 86 John st., N. Y.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Ashton Valve Co. (The), 271 Franklin st., Boston, Mass.; 108 5th av., Chicago, Ill.
Boston Brass Co., 42 Oliver st., Boston, Mass.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Chapman Valve Mfg. Co., Boston, Mass.
Consolidated Safety Valve Co., 111 Liberty st., N. Y.
Crosby Steam Gauge & Valve Co., 97 Oliver st., Boston, Mass.
Dickson Mfg. Co., Scranton, Pa.
Fort Wayne Safety Valve Works, Fort Wayne, Ind.
Green, W. H., Chester, Pa.
Hoppe, Paul F., 107 Liberty st., N. Y.
Kunkle, E. B., Fort Wayne, Ind.
Lidgerwood Mfg. Co., 96 Liberty st., N.Y. **iii.**
National Boiler Works, Bay City, Mich.
Trout, H. G. & Co., 226 Ohio st., Buffalo, N. Y.

Valves—Automatic Safety.

American Steam Gauge Co., 36 Chardon st. Boston, Mass.

Valves—Blowback and Safety.

Ashton Valve Co. (The), 271 Franklin st., Boston, Mass.

Valves—Safety Marine.

Arthur Co. (The), 86 John st., N. Y.
Ashton Valve Co., 271 Franklin st., Boston, Mass.

Valves—Pop Safety.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Consolidated Safety Valve Co., 111 Liberty st., N. Y.
Crosby Steam Gauge & Valve Co., 95 Oliver st., Boston, Mass.
Dickson Mfg. Co., Scranton, Pa.
New England Brass Works, 135 Oliver st., Boston, Mass.

Valves—Slide.

Booth, John, Indianapolis, Ind.
Richardson, F. W. (estate of), Troy, N. Y.
Richardson & Allen Richardson, Troy, N. Y.
Whiting Mfg. Co., Cedar Rapids, Iowa.

Valves—Steam.

Ashton Valve Co., 271 Franklin st., Boston, Mass
Boston Machine Mfg. Co., Granite, c. 1st st., S. Boston, Mass.
Chapman Valve Mfg. Co., 72 Kilby st., Boston, Mass.
Consol. Safety Valve Co., 111 Liberty st., N. Y.
Curtis Regulator Co., 59 Beverly st., Boston, Mass. **30.**
Curtis & Co., Cohoes, N. Y.
Dopp, H. Wm., 462 Ellicott st., Buffalo, N. Y.
Eddy Valve Co. (The), Waterford, N. Y.
Glenn Valve Co., 115 Fremont st., Chicago, Ill. **9.**
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Peet Valve Co., 163 Albany st., Boston, Mass.
Union Water Meter Co., Worcester, Mass.
Walworth Mfg. Co., 14-20 Oliver st., Boston, Mass.
Watson & McDaniel, 248 N. 8th st., Phila., Pa.
Woodman, Geo. & Co., 41 Pearl st., Boston, Mass.

Valves—Steam Muffler.

Consolidated Safety Valve Co. (The), 111 Liberty st., N. Y.; Bridgeport, Conn.

Valves—Straightway.

Eddy Valve Co. (The), Waterford, N. Y.
Rensselaer Mfg. Co., 4th av., c. 12th st., Lansingburgh, N. Y.

Valves—Stop.

Albany Steam Trap Co. (The), 78-80 Church st., Albany, N. Y.
Ludlow Valve Mfg. Co., Troy, N. Y.
Pratt & Cady Co., Hartford, Conn.

Valves—Tank.

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Laidlaw & Dunn Co., Cincinnati, O.
Poage, John N., New Court, n. Harriet st., Cincinnati, O. **73.**

Valves—Throttle.

Dickson Mfg. Co., Scranton, Pa.
Lidgerwood Mfg. Co., 96 Liberty st., N.Y. **iii.**

*Valves—Vacuum Gauge.

Shaw, Thos., 915 Ridge av., Phila., Pa.

Valves—Waste.

Chapman Valve Mfg. Co., Boston, Mass.
Royle, John, & Sons, Railroad av. c. Grand st., Paterson, N. J.

*Valves—Whistle.

Crosby Steam Gauge & Valve Co., 95-97 Oliver st., Boston, Mass.

Varnishes—Alcohol.

Pratt & Lambert, 110 John st., N. Y.
Zinsser, Wm., & Co., 197 William st., N. Y.

Varnishes—Asphalt.

Louisville Asphalt Varnish Co., Louisville Ky.
Nubian Iron Enamel Co., 207 S. Canal st., Chicago, Ill.
Pittsburgh Varnish Co., Pittsburgh, Pa.
Wiarda, Jno. C., 66-68 Commercial st., Brooklyn, N. Y.

Varnishes—Black.

Louisville Asphalt Varnish Co., Louisville, Ky.
Paul, Howard H., 105 Fulton st., Boston, Mass.
Stickney, J. W., & Co., 64 Broad st., Boston, Mass.

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***Varnishes—Cabinet.**

Price, Bond & Co., 255 N. J. Railroad av., Newark, N. J.

Varnish Manufacturers and Dealers.

Adamanta Mfg. Co., 70 Kilby st., Boston, Mass.
Adams, T. J., & Co., 920 N. 17th st., Phila., Pa.
Allen, H. S., & Co., 112 John st., N. Y.
Allyne & White, 112 Front st., San Francisco, Cal.
Alston Mfg. Co., 212 E. Randolph st., Chicago, Ill.
American Varnish Co., 309 North Branch st., Chicago, Ill.
Ammerup, G., 1047 Market st., San Francisco, Cal.
Anglo-American Varnish Co., 111-113 Chestnut st., Newark, N. J.
Anglo-American Varnish & Color Co., 1076 N. Wood st., Chicago, Ill.
Anwell, L. C., 174 Front st., N. Y.
Armitage, J. L., & Co., 54 Dawson st., Newark, N. J.
Ault & Wiborg, 152 E. Monroe st., Chicago, Ill.; ft. New st., Cincinnati, O.
Babcock, J., & Co., 101 Water st., Boston, Mass.; 189 W. Harrison st., Chicago, Ill.
Barrett & Kimball 70 La Salle st, Chicago, Ill.
Bass, T. J., & Co., 14 Ellis st., San Francisco, Cal.
Bate, A. E., 429 Arch st., Phila., Pa.
Bedell & Co., 203 Thomas st., Newark, N. J.
Berry Bros., 352 Pearl st., N. Y.; 402 N. 2d st., St. Louis, Mo.; Lieb, c. White st., Detroit, Mich.; 214 Randolph st., Chicago, Ill.; 22 E. Lombard st., Baltimore, Md.; 42 Pearl st., Boston, Mass.; 177 Front st., Rochester, N. Y.; 102 Main st., Cincinnati, O.; 433 Arch st., Phila., Pa.
Bigelow, Moses, Varnish Co. (The), 166 E. Lake st., Chicago, Ill.; 356-358 Mulberry st., Newark, N. J.
Billings, Taylor & Co., 16 Platt st., N. Y.
Bird Varnish Co. (The), 20 E. 3d st., Cincinnati, O.
Bloomer, E. J., Jr., 2513 N. 7th st., Phila., Pa.
Booden & Son, 243-251 N. 9th st., B'klyn, N. Y.
Booth & Law, Water, c. Olive st., New Haven, Conn.
Bowe, J. C., 36 E. Genesee st., Syracuse, N. Y.
Briggs, J., & Co., 31 Batterymarch st., Boston, Mass.
Brooklyn Varnish Co., 35 Nostrand av., B'klyn, N. Y.
Brooks, C., & Co., 403 W. 12th st., N. Y.
Buckeye Paint & Varnish Co., Toledo, O.
Burbank & Ryder, 91 Water st., Boston, Mass.
California Varnish Works, Utah, n. El Dorado st., San Francisco, Cal.
Calman, E., & Co., 79 Dearborn st., Chicago, Ill.; 299 Pearl st., N. Y. **73.**
Celluloid Varnish Co., 143 Chestnut st., Newark, N. J.
Chase, Wm. D., 167 to 173 N. 9th st., Brooklyn, N. Y.; 21 Cliff st., N. Y.
Chicago Varnish Co., 114 Milk st., Boston, Mass.; 204 Pine st., Chicago, Ill.
Cincinnati Varnish Co., 135 Main st., Cincinnati, O.
Cleveland Varnish Co., 14 Rockland st., Cleveland, O.
Clinton Paint & Varnish Works, 605 Smithfield st., Pittsburgh, Pa.
Coffin, Devoe & Co., 176 E. Randolph st., Chicago, Ill.
Collins Varnish Co., 19 C. J. Bldg., Louisville, Ky.
Cooper, G. H. & Co., 605 W. 38th st., N. Y.
Crockett, David B., & Co., Fairfield av., c. Mountain Grove av., Bridgeport, Conn.
Curtis & Rickerson, 407 to 413 Broadway, Troy, N. Y.
Daschbach Bros., S. 33d, c. Jane st., Pittsburgh, Pa.
De Golyer Varnish Co. (The), 367 Illinois st. Chicago, Ill.; 113 6th st., Troy, N. Y.
Detroit White Lead Works, 101 Jones st., Detroit, Mich.
Devoe, F. W., & Co., 100 Fulton st., N. Y.
Dietz, A. C., & Co., 7 Front st., San Francisco, Cal.
Eagle Paint & Varnish Works, 191 Main st., Allegheny, Pa.
Esterbrook, J., & Co., Newton, Mass.
Ebner, Aldag & Co., Indianapolis, Ind.
Elmendorf, W. A., 38 Larrabee st., Chicago, Ill.
Farrand, Williams & Co., 11 to 17 E. Larned st., Detroit, Mich.
Felton, Rau & Sibley, 136, 138 and 140 N. 4th st., Phila., Pa.
Fisher Varnish Co., Chestnut, c. McWhorter st., Newark, N. J.
Fitzgerald & Co., 365 Mulberry st., Newark, N. J.
Flood, P. F., 207 Thomas st., Newark, N. J.
Folsom, C. A., & Son, Milwaukee, Wis.
Folsom, C. E., & Co., 16 Hamilton, c. Franklin st., Boston, Mass.
Forest City Chemical Co., 29 Euclid av., Cleveland, O.
Fuller, A. P., & Co., Portland, Me.
Gillespie, Chas. H., & Sons, 554 to 562 W. 25th st., N. Y.
Gilman, C. H., 112 Liverpool st., Boston, Mass.
Glidden & Joy Varnish Co., C. & P. & N. Y. C. & St. L. R. R., Cleveland, O.; Kansas City, Mo.
Globe Varnish Co., 185 Main st., Allegheny, Pa.
Grace & Kinney, 4 Pike's Bldg., Cincinnati, O.
Grace & Co., 119 Larrabee st., Chicago, Ill.
Graves, N. Z., & Co., Tasker, c. 20th st., Phila., Pa.
Hardinghaus & Blickle, 203 Race st., Cincinnati, O.
Hedden & Wheeler, 317 N. J. R. R. av., Newark, N. J.
Hewlings, A. J., 108 5th av., Chicago, Ill.
Hewson Bros. & Co., N. Y. av. c. McWhorter st., Newark, N. J.
Hildreth, Templeton & Co., Long Island City, N. Y.
Hildreth Varnish Co., 155-157 Broadway, N. Y.
Hirshberg, Hollander & Co., 110 W. Pratt st., Baltimore, Md.
Hoffman, L. G., 2720 De Kalb st., St. Louis, Mo.
Hopper, A., 252 Pearl st., N. Y.
Horner, C. S., Jr., 364 Ewen st., B'klyn, N. Y.
Hotopp & Co., 268 1st st., Jersey City., N. J.; 467 Canal st., N. Y.
Howell, C., & Co., 212 Race st., Phila., Pa.
Howell, Charles H., & Co., 99 Maiden la., N.Y
Hueter Bros. & Co., 2d, c. Market st., San Francisco, Cal.
Hyde, F. P., 15 Motte st., Boston, Mass
Ilsley, Doubleday & Co., 159 Front st., N. Y.
Indianapolis Varnish Co., Indianapolis, Ind.
Isaacs, D. J., & Co., 381 Pearl st., N. Y.
Johns, H. W., Mfg. Co., 87 Maiden la., N. Y.
Jourdan, J. P., 525 Front st., San Francisco, Cal.
Joy, G. W., & Co., 85 Union st., Boston, Mass
Kasebier, E., & Co., 445 Water st., N. Y.
Kelly, J. R., & Co., 221 Market st., San Francisco, Cal.
King Varnish Co. (The), Akron, O.
Kinkead, A., 201 N. 2d st., St. Louis, Mo.
Knudson, Paterson & Co., 151 Front st., N. Y.
Kohring, G. & Bro., 803 N. 2d st., St. Louis, Mo.
Kubler & Beck, Akron, O.
Kupper & Anderson, Vandervoort av., n. Grand st., Brooklyn, N. Y.
Lamson, John S., & Bro., 77 Maiden la., N. Y.
Lawson Varnish Co., 153 Milk st., Boston, Mass.; 68 Lake st., Chicago, Ill.
Lewenstein, C. L., 275 Pearl st., N. Y.
Lilly, J. O. D., & Sons, Indianapolis, Ind.
Lindeman, Wm. T., & Co., 1400-1402 Frankford av., Philadelphia, Pa.

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Lines, T. T., 817 S. 18th st., Phila., Pa; Long Island City, N. Y.
Liszka, G. C., 215 Varet st., B'klyn, N. Y.
Loos & Schneider, 26 Frankfort st., N. Y.
Lowe Bros., Dayton, O.
Lucas, John & Co., 141-143 N. 4th st., Philadelphia, Pa.
Luhdorff, O., & Co., 2009 Franklin av., St. Louis, Mo.
Lynch & Fitzel, 4 Chestnut st., Allegheny, Pa.
Lyon, B. F. & J. H., Schenectady, N. Y.
Marshall, D., & Bro., S. 12th, n. Cantrell st., Philadelphia, Pa.
Marshall, William, 111-113 Chestnut st., Newark, N. J.
Marx & Rawolle, 163 William st., N. Y.
Masury, J. W., 187 Plymouth st., B'klyn, N. Y.; Bennett Bldg., Fulton, c. Nassau st., N. Y., 190 Michigan av., Chicago, Ill.
Mather Varnish Co., 262 Elk st., Buffalo, N. Y.
Mayer & Lowenstein, 110 Dearborn st., Chicago, Ill.; 80 Beekman st., N. Y.; Long Island City, N. Y.
McCreary, J. A., & Co., 27 St. Charles st., Baltimore, Md.
McGuiness, J., Long Island City, N. Y.
McNamara, M., Clark av. & M. C. R. R., Detroit, Mich.
Miller Bros. Varnish Works, Sherman at C. & P. R. R., Cleveland, O.
Miller, L. M., Chelsea, Mass.
Minett & Co., 16 N. 12th st., Phila., Pa.; 60 Pearl st., N. Y.
Moller & Schuman, Flushing av., c. Marcy av., B'klyn, N. Y.
Moore, J. C., & Co., 31 Main st., Cincinnati, O.
Morrison, J. H., 19 Barclay st., N. Y.
Morrison, Hanna & Allen, 208 S. Clinton st., Chicago, Ill.
Mound City Varnish Co., 2d, c. Howard st., St. Louis, Mo.
Murphy & Co., 227 B'way, N. Y.; 22d and Dearborn sts., Chicago, Ill.; 300 S. 4th st., St. Louis, Mo.; 566 Canal st., Cleveland, O. 84.
Myers, J. H., 332 N. 24th st., Phila., Pa.
New Haven Japan & Varnish Co. (The), Kimberley av., Bridgeport, Conn.
Newton, E. T., 79 Dearborn st. (Room 2), Chicago, Ill.
New York Enamel Paint Co. 178 Prince st., N. Y.
Nubian Iron Enamel Co. (The), 207 S. Canal st., Chicago, Ill.
Ohio Varnish & Oil Co., Rockland av., Cleveland, O.
Palmer, A. W., & Co., 53-55-57 Oliver st., Newark, N. J.
Parrott Varnish Co., 519 St. Charles st., St. Louis, Mo.; 227 5th av., Chicago, Ill.; N. Washington av., Bridgeport, Conn.
Paul, H. H., 105 Fulton st., Boston, Mass.
Pearl, E., 51 Kilby st., Boston, Mass.
Perrin, Payson & Co., 73 Little W. 12th st., N. Y.
Pfaff, J. & Co., 694 Central av., Cincinnati, O.
Phillips, C. C., & Co., 2213 Emerald st., Phila., Pa.
Pittsburgh Varnish Co., 83 Main st., Allegheny, Pa.
Platt, L. A., & Co., 21 Brown st., Waterbury, Conn.
Pollion & Staples, 148th, c. R. R. av., N. Y.
Pomeroy & Fischer, 30 Frankfort st., N. Y.
Poor, Towne & Co., 29 India st., Boston, Mass.
Pratt & Lambert, 47 John st., N. Y.
Prescott, W., 92 Quay st., Albany, N. Y.
Price, G. F., & Co., 104 Oliver st., Newark, N. J.
Price, H. L., 816 Market st., Phila., Pa.
Price, Bond & Co., 255 N. J. R. R. av., Newark, N. J.
Raynolds, C. T., & Co., 106-108 Fulton st., N. Y.; 20 E. Lake st., Chicago, Ill.
Reed, C., & Co., 429 Arch st., Phila., Pa.
Reed, Charles C., & Co., 112 E. 14th st., N. Y.; 79 N. 12th st., B'klyn, N. Y.; 153 Congress st., Boston, Mass.
Reid, J. J., 354 Mulberry st., Newark, N. J.
Reliance Varnish Co., 49 Driggs st., B'klyn, N. Y.
Reno Bros., Pulaski, Pa.
Robbins, A., & Co., 1539 N. 8th st., St. Louis, Mo.
Robertson, E. C., 124 Chestnut st., Newark, N. J.
Rogers & Pyatt, 80 Maiden la., N. Y.
Rosenberg, D., & Son, 207 Av. D, N. Y.; 311 Wabash av., Chicago, Ill.
Royal Varnish & Oil Co., 312 Sycamore st., Cincinnati, O.
Rutherford, W., 325 Griscom st., Phila., Pa.
Sauerwein, R., Nebraska av., St Louis, Mo.
Schaefer, J. M., 1002 Spring Garden st., Phila., Pa.
Schnadig, J. J., 79 Dearborn st., Chicago, Ill.
Schrack, C., & Co., 152 N. 4th st., Phila., Pa.; Camden, N. J.
Seipel, John, 90-92 Park Row, N. Y.
Senour Mfg. Co., 2520 Quarry st., Chicago, Ill.
Shaw, G. H., Middleboro, Mass.
Shaw, W. C., 90 Crosby st., N. Y.
Shipman & Bolen, 352 Mulberry st., Newark, N. J.
Smith, Edward & Co., 158 William st., N. Y.
Spicer, H., 207 Carter st., Phila., Pa.
Spilman, B. F., 244 Washington st., Boston, Mass.
St. Louis Varnish Co., 97 Grand av., St. Louis, Mo.
Standard Varnish Works, 207 Av. D, N. Y.; 159 Franklin st., Boston, Mass.
Steffens, J., 84 Vesey st., Newark, N. J.
Stiles, E. D., 135 E. Kinney st., Newark, N. J.
Stimson & Co., 149 Milk st., Boston, Mass.
Sullivan & Ravekes, 108 California st., San Francisco, Cal.
Tascott, J. B. Mfg. Co., 21 S. Canal st., Chicago, Ill.
Thibaut, E. A., & Co., 163 Pearl st., N. Y.
Thresher & Co., Dayton, O.
Tower & Co., Dayton, O.
Turner, A. H., Norfolk, Va.
United States Varnish Co. (The), Colerain av., n. Straight st., Cincinnati, O.
Valentine & Co., 66 Lake st., Chicago, Ill.; 153 Milk st., Boston, Mass.; 364 Ewen st., B'klyn, N. Y.; 245 B'way, N. Y.
Wadsworth, Howland & Co., 263 Wabash av., Chicago, Ill.; 82-84 Washington st., Boston, Mass.
Walton, N. C., Sr., 219 Mission st., San Francisco, Cal.
Ware, I. D. & Co., Clearfield, c. Howard st., Phila., Pa.
Washburn, Thos. F., 10 Lister av., Chicago, Ill.
Wellpott, C. H. W, 3220-3222 N. B'way, St. Louis, Mo.
Wheeler, A., 145 Milk st., Boston, Mass.
Wheeler & Neal, Long Island City, N. Y.
Whitby, C. H., 513 E. Falls av., Baltimore, Md.
Whittier, Fuller & Co., Front, c. Pine st., San Francisco, Cal.
Williams, J. C., & Son, 50 Clinton st., Buffalo, N. Y.
Williams, Dimond & Co., 202 Market st., San Francisco, Cal.
Winter, P. D., Utah, n. Centre st., San Francisco, Cal.
Wolf, H., & Co., 172 W. Liberty st., Cincinnati, O.
Wood, G. L. & Son, 246 Pearl st., N. Y.; 2 Wythe av., Brooklyn, N. Y.; 79 Dearborn st., Chicago, Ill.
Worden, W. H., 223 Sacramento st., San Francisco, Cal.
Yates & Co., 113 Front st., San Francisco, Cal.
Young, A., & Son, 7 W. Pratt st., Baltimore, Md.
Zinsser, Wm., & Co., 197 William st., N. Y.
Zumpf, C., & Co., Sharpsburg, Pa.
Zumpft, C. F., Sumner sta., W. P. R. R., Pittsburgh, Pa.
Zumpft, N., & Co., Sumner sta., W. P. R. R., Pittsburgh, Pa.

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Varnishes—Railroad.

Babcock, John & Co., 2 Liberty sq., Boston, Mass.
Berry Bros., Detroit, Mich.; 96 John st., N. Y.
Bigelow, Moses & Co., Newark, N. J., Chicago, Ill.
Billings, Taylor, 16 Platt st., N. Y.
Brill, J. G., Co., Philadelphia, Pa.
Brooks, Clarence & Co., 403 W. 12th st., N. Y.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Calman, Emil & Co., 299 Pearl st., N. Y. **73.**
Cary, Ogden & Parker, Chicago, Ill.
Chilton Mfg. Co., 147 Fulton st., N. Y.; 141 Milk st., Boston, Mass.
Coffin, Devoe & Co., 176 Randolph st., Chicago, Ill.
De Golyer Varnish Co. (The), Chicago, Ill.
Devoe, F. W., & Co., William and Fulton sts., N. Y.
Falls City Varnish Co., Louisville, Ky.
Farrand, Williams & Co., Detroit, Mich.
Felton, Rau & Sibley, 136 n. 4th st., Phila., Pa.
Foote, Orlo A., Cleveland, O.
Gillispie, Chas. H., & Sons, 554 W. 25th st., N. Y.
Glidden & Joy, Cleveland, O.
Greeley, E. S., & Co. (The), 5-7 Dey st., N. Y.
Hildreth Varnish Co., 155 B'way, N. Y.
Johns, H W. Mfg. Co., 87 Malden la., N. Y.; Chicago & Phila.
Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**
Masury, J. W., & Son, 92 Nassau st., N. Y.; 190 Michigan av., Chicago, Ill.
Murphy & Co., 227 B'way, N. Y.; 566 Canal st., Cleveland, O.; 300 S. 4th st., St Louis, Mo.; 22d and Dearborn sts., Chicago, Ill. **84.**
Parker & Gillespie, 554 W. 25th st., N. Y.
Parrott Varnish Co., Bridgeport, Conn.
Phillips, Chas. C. Co., Emerald & York sts., Phila., Pa.
Pittsburgh Varnish Co., Pittsburgh, Pa.
Pomeroy & Fisher, 30 Frankfort st., N. Y.
Post & Company, Cincinnati, O.
Pratt & Lambert, 47 John st., N. Y.
Price, Bond & Co., 255 N. J. Railroad av,, Newark, N. J.
Pugh & Russell, Stewart Bldg., N. Y.
Reed, Chas. C., & Co., 112 E. 14th st., N. Y.
Reynolds, C. T., & Co., Fulton st., N. Y.
Sherwin, Williams Co. (The), Cleveland, O.
Shipman & Bolen, Newark, N. J.
Smith & Co., Edward, 158 William st., N. Y.
Standard Varnish Works, 207 Av. D, N. Y.
Street Railway Supply Co., Cleveland, O.
U. S. Varnish Co., 258 Colerain av., Cincinnati, O.
Valentine & Co., 245 B'way, N. Y.; Chicago, Ill.; Boston, Mass.; Paris, France.

Varnishes—Shellac.

Salomon, L. A., & Bro., 216 Pearl st., N. Y.

Varnish—Ship and Spar

Calman, Emil & Co., 229 Pearl st., N. Y. **73.**
Clark, G. F., & Co., 43 Milk st., Boston, Mass.
Murphy & Co., 227 B'way, N. Y. **84.**
Parrott Varnish Co., Bridgeport, Conn.
Pratt & Lambert, 47 John st., N. Y.
Richardson, Chas., & Co., 85 Oliver st., Boston, Mass.
Rosenberg, D., & Sons, 207 Av. D, N. Y.

*Varnish—Telegraph.

Calman, Emil & Co., 299 Pearl st., N. Y. **73.**

Varnishes—Wire Cloth.

Anglo-American Varnish Co. Newark, N. J.

Veneer Manufacturers.

Albro, E. D, Co. (The), 685 W. 6th st., Cincinnati, O.
Allen, Jas. T., 235 Canal st., N. Y.
Astoria Veneer Mills & Lumber Co., 1009 Fulton st., Louisville, Ky.
Aviles Bros., 381 South st., N. Y.
Bates, Frank C., Newport, Vt.
Bruce, Jas., 6 Howard st., N. Y.
Burrell & Whitman, Sunderland, Vt.
Burton, C. H., & Co., John, c. Augusta st., Cincinnati, O.
Butler, J. A., Jr., Newport, Vt.
Cole, Isaac I., & Son, 427 8th st., N. Y.
Copcutt, J., & Co., 440 Washington st, N. Y.
Cuthbert, James O., 37 Adams Express Bldg., Chicago, Ill.
Daniels & Co., 202 Centre st., N. Y.
Davis, Geo. S., 254 Elizabeth st., N. Y.
Delatour, J. A., 476 Pearl st., N. Y.; 176 Centre st., N. Y.
De Pinal, J., 243 W. Pearl st., Cincinnati, O.
Dustenberg, H. A., Yungbluth av., Cincinnati, Ohio.
Emery, Geo. D., 54 Canal st., Boston, Mass.
Enterprise Mfg. Co., Sandusky, O.
Frost & Peterson, 141 W. 13th st., N. Y.
Gardner & Co., 643 W. 48th st., N. Y.
Gilbert, D., Claryville, N. Y.
Goldsmith, F. L., 19 Congress st., Boston, Ma.
Graham, J. R., Jr., 316 11th av., N. Y.
Grand Rapids Veneer & Panel Co., N. Front, and 7th sts., Grand Rapids, Mich.
Grundy & Brigham, Tigerton, Wis.
Hagemeyer, Geo., ft. E. 11th st., N. Y.
Harwood Mfg. Co., 91 Summer st., Boston, Ma
Hayden Bros., 22d, c. Jefferson st., Chicago, Ill
Henderson, A., & Co., 77 Av. D, N. Y.
Hirsh, L., & Bro., 42 S. Clinton st., Chicago, Ill.; 214 Centre st., N. Y.
Holmes, W. T., & Co., Ellenville, N. Y.
Indianapolis Cabinet Co., Indianapolis, Ind.
Indianapolis Veneer Mfg. Co., Indianapolis, Ind.
Jewell, A. M., & Co., Berry, n. 3d st., San Francisco, Cal.
Katz, Emanuel, 124 Elizabeth st., N. Y.
Kundtz, T., 31 Centre st., Cleveland, O.
McCombs & Co., 507 W. Kinzie st., Chicago, Ill.
McCorkell, Robt., 118 W. Lake st., Chicago, Ill.
Memphremagog Veneer Works, Newport, Vt.
Monteath, J. H., 135 Centre st., N. Y.
Palmer, Parker & Co., 133 Portland st., Boston, Mass.
Pearson, T. B., Lorimer, c. McKibben st., Brooklyn, N. Y.
Racine Hardware Mfg. Co., Racine, Wis.
Ranger, R. H., & Co. (E. W.), Wilton, Me.
Rapp's, A. L., Sons, 209 S. 2d st., Phila., Pa.; 425 8th st., N Y.
Rayner, J., 283 20th st., Chicago, Ill.
Read, Geo. W., & Co., 200 Lewis st., N. Y
Rice, B., 28 Tiffany pl., Brooklyn, N. Y.
Roberts & Co., Upper Central way, Cleveland, Ohio.
Schelna, Joseph, 24 Pell st., N. Y.
Searles, J. H., Newport, Vt.; 501 E. 70th st., N. Y.
Seaver & Co, Tigerton, Wis.
Shiels, Hugh, ft. Plum st., Cincinnati, O.
Shiels & Lyford, Plum st., Cincinnati, O.
Sleeper, J. C., & Co., 53 Portland st., Boston, Mass.
Smith, J. W., 157 S. Canal st., Chicago, Ill.
Smith & McCombs, 507 W. Kinzie st., Chicago, Ill.
South Side Mfg. Co., Petersburg, Va.
Sperry, John, & Co., 333 Hudson st., N. Y.
Spurr, C. W., Co., 465 E. 10th st., N. Y.; 35 Bedford st., Boston, Mass.
Strong, J., & Son, Gerry, N. Y.
Sturn, Adolph, 51-53 W. Washington st., Chicago, Ill.
Upham Mfg. Co. (The), Marshfield, Wis.
Uptegrove, Wm. E. & Bro., 465 E. 10th st., N. Y.
Wakeman & Ray, 648 Main st., Bridgeport, Conn.
Washburn, J. M., & Co., 52 La Salle st., Chicago, Ill.

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Watson & Robinson, 32 Queen st., Gtn., Phila., Pa.
Weston, J. D., Tonawanda, N. Y.
Wheeler, W. E., Toledo, O.
Williams, W. H., Long Island City, N. Y.
Worden, A. R. & M. A., Ypsilanti, Mich.

Ventilators—Car.

Davies, James R., 13 Park Row, N. Y.
McGovern & Wilson, 185 13th st., Detroit, Mich.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Standard Car Heating & Ventilating Co. (The), Duquesne Way and Garrison Alley, Pittsburgh, Pa.
Van Noorden & Co., E. Boston, Mass.

Viaducts.

Chicago Forge & Bolt Co., 231 Clark st., Chicago, Ill.
Detroit Bridge & Iron Works, Detroit, Mich.
Dominion Bridge Co. (Ltd.), Toronto, Ont.
Edge Moor Iron Co., Wilmington, Del.
Gottlieb & Co., A., Major Blk., Chicago, Ill.
Massillon Bridge Co., Massillon, O.
Mo. Valley Bridge & Iron Works, Leavenworth, Kas.
New York Stone Contracting Co., 113 E. 25th st., N. Y.
Phœnix Bridge Co., 410 Walnut st., Phila., Pa.; 49 William st., N. Y.
Phœnixville Bridge Works, Phœnixville, Pa.
Pittsburgh Bridge Co., Pittsburgh, Pa.
Union Bridge Co., 1 Broadway, N. Y.

Vises—Manufacturers.

Adams, A. L., Cedar Rapids, Ia.
Armstrong Mfg. Co. (The), Bridgeport, Conn. **33.**
Athol Machine Co., Athol, Mass.
Avery Elevator Bucket Co., Leonard & Winter sts., Cleveland, O.
Bartholomew & Houser, Sidney, O.
Billings & Edmunds Mfg. Co. (The), Rocky Hill, Conn.
Billings & Spencer Co. (The), Hartford, Conn.
Boker, Hermann & Co., 101-103 Duane st., N.Y.
Bonney Vise & Tool Co., 3015 Chestnut st., Phila., Pa.
Burk, P. F., 360 Dorchester av., Boston, Mass.
Canedy, W. E., Mfg. Co., Rochester, Minn.
Charles Parker Co. (The), Meriden, Conn,
Cheney Anvil & Vise Co., 115 Fort st., Detroit, Mich
Chicago Scale Co., 147-151 S. Jefferson st., Chicago, Ill.
Cincinnati Tool Co. (The), Cincinnati, O.
Claffy, John, 48 Dey st., N. Y. **91.**
Cook, Asa S., Hartford, Conn.
Dewick, C. F., & Co., 360 Dorchester av., S. Boston, Mass.
Donegan & Swift, 174 Fulton st., N. Y.
Eagle Anvil Works, Trenton, N. J
Fairhaven Iron Works, Fairhaven, Mass.
Garvin, E. E., & Co., 139-143 Centre st., N. Y.
Gilkerson Machine Works (The), Homer, N. Y.
Gillispie Bros. & Co., 21st and R. R. sts., Pittsburgh, Pa.
Hall Mfg. Co., 23 Dey st., N. Y.
Hinsdale Machine & Tool Co., Hinsdale, N.H.
Howard Iron Works, 285 Chicago st., Buffalo, N. Y.
Illinois Iron & Bolt Co., Carpentersville, Ill.
Iron City Tool Works (Ltd.), 32d and Smallman sts., Pittsburgh, Pa.
Joyce, Cridland & Co., Wyandot st. and R. R., Dayton, O. **27.**
Kimball Mfg. Co., 17 Travers st., Boston, Mass.
Leet, C. D., Bridgeport, Conn.
McCoy & Sanders, 28 Warren st., N. Y.
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Merrill Bros., 24 First st., B'klyn; 465 Kent av., Brooklyn, E. D., N. Y.
Moore & Barnes Mfg. Co., 103 Chambers st., N. Y.
New London Vise Works, New London, Conn.
Peck, Stow & Wilcox Co., Southington, Conn.
Pedrick & Ayer, 1025 Hamilton st., Phila., Pa. **60.**
Pratt & Whitney Co. (The), Hartford, Conn.
Prentiss Vise Co., 23 Dey st., N. Y.
Read, Gleason & Read, 136 First st., Brooklyn, N. Y.
Rose Pipe Vise Co., 154 E. Lake st., Chicago,
Rouse, R. R., Indianapolis, Ind.
St. Louis Vise & Artesian Well Tool Co., 1430 N. 10th st., St. Louis, Mo.
Seneca Falls Mfg. Co. (The), Seneca Falls, N. Y.
Smith, H. B., Co. (The), 137 Centre st., N. Y.
Stearns, E. C., & Co., Syracuse, N. Y.
Stephens, Melvin, 41 Dey st., N. Y.
Tower & Lyon, 95 Chambers st., N. Y.
Trenton Vise & Tool Works, Trenton, N. J.
Walker, Geo. A., 35 Sudbury st., Boston, Mass.
Wells Bros. & Co., Greenfield, Mass.
Wyman & Gordon, Worcester, Mass

* Vulcanized Fibre.

Vulcanized Fibre Co., Wilmington, Del; 14 Dey st., N. Y. **96.**

Wagons—Baggage.

Buffalo Scale Co., 322 Exchange st., Buffalo, N. Y.
Byram & Co., 435 Guion st., Detroit, Mich.
Kilbourne & Jacobs Mfg. Co. (The), 22 E. Broad st., Columbus, O. **2.**

Washers—Asbestos.

Johns, H. W., Mfg. Co., 87 Maiden la., N. Y.

Washers—Brass.

Steele & Johnson Mfg. Co. (The), Waterbury, Conn.

Washers—Steam Boiler.

Nathan Mfg. Co., 94 Liberty st., N. Y.

Washers—Iron.

Ætna Nut Co. (The), Southington, Conn.
Allison Mfg. Co. (The), 32d and Walnut sts., Phila., Pa.
American Bolt Co., Lowell, Mass. **24.**
Arms, Bell & Co., Youngstown, O.
Bliss & Tracy, 42-44 W. Monroe st., Chicago, Ill.
Bourne & Knowles Mfg. Co. (The), Cleveland, Ohio.
Buffalo Heating Apparatus Co., 143-151 Perry st., Buffalo, N. Y.
Burke, P. F., 360 Dorchester av., S. Boston, M.
Clark Bros., & Co., Milldale, Conn.
Caldwell, M. A., North East, Pa.
Cowles, C., & Co., New Haven, Conn.
Eastwood Laundry Machinery Co. (The), 40 Cortlandt st., N. Y.
Edge, J., Little Falls, N. J
Elba Iron & Bolt Co. (Ltd.), Pittsburgh, Pa.
Eyster, S. S., Edon, O.
Gilmore, E. W., & Co., North Easton, Mass.
Hall, Lafayette, & Co., New Market, N. H.
Haskell, Wm. H. Co., Pawtucket, R. I.
Hoopes & Townsend, Phila. Pa.
Humphrey, H. W., Unionville, Conn.
Hurlbut Mfg. Co., Racine Junction, Wis.
Ladd, Levi, 34 Beach st., Boston, Mass.
Lombard, Geo. R., & Co., Augusta, Ga.
McMurtrie Geo. G., 22d and Railroad sts., Pittsburgh, Pa.
Mahoning Iron Works (Brown, Bonnell & Co.), Youngstown, O.
Marland, Neely & Co., S. 22d st., Pittsburgh, Pa.

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Mason, Jas. P., 2641 Jessup st., Phila., Pa.
Meyer & Co., Throopsville, N. Y.
Michigan Bolt & Nut Works, Detroit, Mich.
Milwaukee Washer Co., Milwaukee, Wis.
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
New Albany Rail Mill Co., New Albany, Ind.
Peerless Mfg. Co., 17th and Magazine sts., Louisville, Ky.
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Read, John R., Providence, R. I.
Smith, H. D., & Co., Plantsville, Conn.
Smith, Thos., & Co., Worcester, Mass.
Sommer's, John, Son, 8-12 Pearl st., Newark, N. J.
South Tredegar Iron Co., St. Louis, Mo.
Stanley Works, New Britain, Conn.
Stanwood, G. M., & Co., 261-265 Commercial st., Portland, Me.
Topliff & Ely, Elyria, O.
Tudor Iron Works, St Louis, Mo.
Upson Nut Co. (The), Unionville, Conn.
Wheeling Hinge Co., Wheeling, W. Va.

Washers—Leather.

Buffalo Belting Works, 14-24 Wells st., Buffalo, N. Y.
Grilley, C. T., 2109 Washington st., Boston, Mass.
Hennessy Mfg. Co., Syracuse, N. Y.
Marston, I G., & Co., 3 Appleton st., Boston, Mass.
Way, Chas. A., & Co., Bristol, Conn.

Washers—Nut Lock.

Van Kuran Elastic Nut Lock Washer Co., Omaha, Neb.

Washers—Railway & Car.

Bosley, D. W., & Co., Chicago, Ill.
Bradley & Smith, 251 Pearl st., N. Y.
Packard & Burrill, 8 Union st., Boston, Mass.
Phœnix Steel Wire Broom & Brush Co., 199 E. Randolph st., Chicago, Ill.
Marston, I. G., & Co., 3 Appleton st., Chicago, Ill.

Washers—Prop Block.

Grilley, C. T., 2109 Washington st., Boston, Mass.

Washers—Track Bolt.

National Lock Washer Co. (The), 52 Lawrence st., Newark, N. J.
Vulcanized Fibre Co., Wilmington, Del., and 14 Dey st., N. Y. 98.

Waste—Cotton.

Adams Bros., 571 Atlantic av., Boston, Mass.
Allen, W. D., & Co., 151 E. Lake st., Chicago, Ill.
Almy, B. F., 69 Canal st., Providence, R. I.
Alsworth & Downey, 156 N. Front st., Phila., Pa.
American Sick Mfg. Co., 2111 Market st., St. Louis, Mo.
Arms, W. S., Springfield, Mass.
Atlanta Waste Works, Atlanta, Ga.
Barker, J. M., & Co., Worcester, Mass.
Barlow, F., 579 Atlantic av., Boston, Mass.
Barlow, J., 4310 Paul st. (Fkd.), Phila., Pa.
Barnum Bros., 187 River st., Troy, N. Y.
Beggs, James, & Co., 9 Dey st., N. Y.
Bishop, R., 157 W. 6th st., Boston, Mass.
Blaisdell, S., Jr., & Co., Chicopee, Mass.
Blakeley & Son, John, 215 Church st., Phila., Pa.
Bradford, L. & Co., Walpole, Mass.
Briggs, H. A., & Co., Pawtucket, R. I.
Brooks, J., 5413 Wyalusing st., Phila., Pa.
Buck, M. M., & Co., 209 N. 3d st., St. Louis, Mo.
Butler, J., Lowell, Mass.
Carpenter, Geo. B., & Co., 202 S. Water st., Chicago, Ill. 31.
Carpenter & Bartlett, 190 Front st., Hartford, Conn.
Carr, P. H., Taunton, Mass.
Chase, S. Y., Warwick, R. I.
Chester, A. L., Westerly, R. I.
Childs, H. L., & Co., 8 Smithfield st., Pittsburgh, Pa.
Cincinnati Railway Supply Co., 53 W. 2d st., Cincinnati, O.
Claflin, C. J. & Co., Cove Lands, Providence, R. I.
Conerty, T., 471 River st., Troy, N. Y.
Corr & Bro., 1922 N. 2d st., Phila., Pa.
Corrigan, F., 1511 Bodine st., Phila., Pa.
Crandall, A. A., Westerly, R. I.
Crompton, T. 2420 N. Front st., Phila., Pa.
Crowley, J. A., Fall River, Mass.
Crowson, V. W., & Co., Westfield, Mass.
Crowson & Fairfield, Westfield, Mass.
Dalzell's, James, Son & Co. (Ltd.), 70 Water st., Pittsburgh, Pa
Darrow, A. R., New London, Conn.
Denlinger Bros., 90 Water st., Pittsburg, Pa.
Donegan & Swift, 174 Fulton st., N. Y.
Dunbar, Geo. & Co., 74 Pearl st., Boston, Mass.
Egan, R., & Co., 19 Burling sl., N. Y.
Ellice, John & Co., 81 Dey st., N. Y.
Emerson, A. & Co., 38 Purchase st., Boston, Mass.
Finigan, Andrew, 221 S. 5th av., N. Y.
Fisher, W. L., 67 Roseville av., Newark, N. J.
Fow, D. J. & Bro., 1803 Hope st., Phila., Pa.
French, H., Cumberland, c. N. 3d st., Phila., Pa.
Gallagher, D. J., 10 N. Canal st., Chicago, Ill.
Greenwood, T., 177 Rittenhouse (Gtn.), Phila., Pa.
Haines, J. S., Great Falls, N. H.
Hargreaves, H., 69 Canal st., Providence, R. I.
Harvard Mills, Harvard, Mass.
Henderson, J., 47 Pearl st., Boston, Mass.
Hepworth, W., 2042 Coral st., Phila., Pa.
Hill & Cutler, 567-569 Atlantic av., Boston, M.
Howard, Edw., 39 W. Broadway, N. Y.
Howard, J. L. & Co., 440 Asylum st., Hartford, Conn.
Hull, S. E., Millbury, Mass.
Ingraham, T., 198 Superior st., Cleveland, O.
Jessup, F. W. & Co., 67 Liberty st., N. Y.
Joseph, J & Bros., 23 E. 2d st., Cincinnati, O.
Kay Bros. & Co., 121 Water st., Pittsburgh, Pa.
Kay, J. & Son, 2208 E. Susquehanna st., Phila., Pa.
King, A., 76 Sudbury st., Boston, Mass.
Lacovia Mfg. Co., 40 Exchange pl., N. Y.
Lewis, N. & N. R., Fall River, Mass.
Lyon, J. W., & Co., 44-46 Duane st., N. Y.
McCloskey, J. J., 121 N. Front st., Phila., Pa.
McGrath, C., 127 N. Front st., Phila., Pa.
McQuade, P., 1443 Howard st., Phila., Pa.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Martin, W. H., 152 Federal st., Boston, Mass.
Massasoit Mfg. Co., Fall River, Mass.; 96 Leonard st., N. Y.
Maurer, J. B., 2544 N. 3d st., Phila., Pa.
Montgomery & Co., 105 Fulton st., N. Y.
Mulheran, J., 2426 Howard st., Phila., Pa.
Noyes, W. H., & Bro., Newburyport, Mass.
O'Neill, C. & Son, 57 N. Front st., Phila., Pa.
O'Neil & Bro., 1613 N. 3d st., Phila., Pa.
Olmstead & Tuttle, Springfield, Mass.
Page, B. V., & Co., 44-54 Erie st., Chicago, Ill.
Palmer, Herbert F., 23 Thomas st., N. Y.
Parker, W. R., 26 Eddy st., Providence, R. I.
Parsons, L. P., 4027 Orchard st. (Fkd.), Phila., Pa.
Phœnix Packing Rubber Co., 108 Liberty st., N. Y.
Pine, J. Le Roy Co., 550 Fulton st., Troy, N.Y.
Pitkin, R., & Co., 243 State st., Hartford, Conn.
Pittsburgh Supply Co. (Ltd.), 105 Wood st., Pittsburgh, Pa.
Pratt, Summer & Co., Worcester, Mass.
Providence Waste Co., 7 Market sq., Providence, R. I.

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Putnam, G. D., & Co., 127 Milk st., Boston, Mass.
Rall, W. F., 5 Jones la., N. Y.
Richmond, F. H., & Co., 17 Fountain st., Providence, R. I.
Roach, P., 111 N. Front st., Phila., Pa.
Robinson's, E. Sons, 2232 Coral st., Phila., Pa.
Sinister, C. R., 4517 Main st. (Myk.), Phila., Pa.
Southern Waste Works, 1601 Carpenter st., Phila., Pa.
Smith, J. F., 36 Peck sl., N. Y.
Smyth, B., Master, c. Adrian st., Phila., Pa.
Springfield Waste Co., Springfield, Mass.
Stinson, J., 2846 Fairhill st., Phila., Pa.
Storey, R., Oxford, c Leib st., Phila., Pa.
Strong, C. L., & Sons, Chatham, Conn.
Sykes, D., 2080 E. Dauphin, Phila., Pa.
Taggert, P., 1601 N. 3d st., Phila., Pa.
Tass & Burr, Belleville, R. I.
Thornly, Richard, Cranston, R. I.
Thorp, J., Taunton, Mass.
Trantwein, J., 137 River st., Troy, N. Y.
Troy Waste Mfg. Co., 461-467 River st., Troy, N. Y.
Turner, Wm. H., 86 Leonard st., N. Y.
Union Wadding Co., Pawtucket, R. I.
Unselt, J., 3802 Bakers la, Phila., Pa.
Wagner, C. P., & Co., 20 Broadway, Cincinnati, O.
Wallace, J. H., 1620 Lombard st., Philadelphia, Pa.
Wallace, R., Fitchburg, Mass.
Wamesit Mills, Lawrence, Mass.
Ward & Brady, 517 N. Levee, St. Louis, Mo.
Ware Woolen Co., Worcester, Mass.
We-t, Geo., Ballston Spa, N. Y.
Willard, L., & Co., Walpole, Mass.

Watches—Non-Magnetic.

American Waltham Watch Co., Waltham, Mass
Geneva Non-Magnetic Watch Co. (Ltd.), 171 Broadway, N. Y.
Giles Bros., & Co., 101 State st., Chicago, Ill.
Non-Magnetic Watch Co., 171 Broadway, N. Y.

Watches—Railroad.

Atkinson Bros., 926 Chestnut st., Philadelphia, Pa.
Rockford Watch Co., Rockford, Ill.
Shurly Watch & Jewelry Mfg. Co., 75 State st., Chicago, Ill.
Townsend, J. S., 1554 Wabash av., Chicago, Ill.
Waterbury Watch Co., 52 Maiden la., N. Y.
Wathier & Co., Joseph P., 178 West Madison st., Chicago, Ill.

Watch Shields—Anti-Magnetic.

Anti-Magnetic Shield & Watch Case Co., 18 John st., N. Y.
Giles Bros., & Co., 101 State st., Chicago, Ill.
Giles, Fayette S., 18 John st., N. Y.
Shurly Watch & Jewelry Mfg. Co., 75 State st., Chicago, Ill.

Watchmen's Detectors—Time.

Buerk, J. E., 230 Washington st., Boston, Mass.
Eco Magneto Clock Co., 111 Summer st., Boston, Mass. **76.**
Hoppe, Paul F., 107 Liberty st., N. Y.
Howard, E., Watch & Clock Co. (The), Boston, Mass.
Imhauser, E., 212 Broadway, N. Y. **59.**

Water Closets.

Adee, Fred., & Co., 52 Beekman, c. Cliff st., N. Y.
Alexander & Park, Detroit, Mich.
Aspinall, Edwin, 100 Beekman st., N. Y.
Bailey, Farrell & Co, 619 Smithfield st., Pittsburgh, Pa.
Bishop, Wm., 210 South st., N. Y.
Blessing, C. A., Montgomery av. & 6th st., Philadelphia, Pa.
Brown & Sharp Mfg. Co., Providence, R. I.
Bulek & Sherwood, Detroit, Mich.
Clark, Winford S., 124 Baxter st., N. Y.
Colwell Lead Co., 63 Centre st., N. Y.
Gants, Wm. H., & Co., San Francisco, Cal.
Haines, Jones & Cadbury, 1136 Ridge av., Philadelphia, Pa.
Harrison, Chas., & Co., 16 W. 4th st., N. Y.
Hartford Glass Water Closet Co., Hartford, Conn.
Huber, Henry, & Co., 85 Beekman st., N. Y.
Mayor, Lane & Co., 119 Walker st, N. Y.
Moore, Geo. R., Jr., 526 Cherry st., Philadelphia, Pa.
Morrison, David, 55 W. 16th st., N. Y.
Mott, J. L., Iron Works (The), 88 Beekman st., N. Y.
Sanitary Water Closet Co., 91 Westminster st., Providence, R. I.
Sanitas Mfg. Co., 4 Pemberton sq., Boston, Mass.
Smith, W., San Francisco, Cal.
The Thomas Gibson Co., 273 Walnut st., Cincinnati, O.
Tarrey, J. E., & Son, Rockland, Me.
United Brass Co. (The,) 79 Fulton st., N. Y.
Vannevar, E. B., 58 Fulton st., Boston, Mass.
Zane, J., & Co., 81 Sudbury st., Boston, Mass.

Water Columns & Stand Pipes.

Allen & Co., 140-142 E. 41st st., N. Y.
Detroit Iron Tower Co., 88 Griswold st., Detroit, Mich.
Ditson, Allen, Larned, Kansas.
Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
Hazleton Iron Works, Hazleton, Pa.
Laidlaw & Dunn Co., Cincinnati, O.
Mansfield, A. K., & Co., 280 B'way, N. Y.
McGowan Pump Co. (The), 141-143 W. 2d st., Cincinnati, O.
Poage, John N., Court and Harriet sts., Cincinnati, O. **73.**
Reliance Gauge Co., 85 Euclid av., Cleveland, Ohio.
Reeves Bros., Niles, O.
Sharon Boiler Works, Sharon, Pa.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Star Iron Tower Co., Fort Wayne, Ind.
Union Hydraulic Works, Germantown av. and 2d st., Phila., Pa.

Water Columns—Automatic.

Fairbanks, Morse & Co., Lake and La Salle sts., Chicago, Ill.
McGowan Pump Co., 141 W. 2d st., Cincinnati, Ohio.
Poage, John N., Court and Harriet sts., Cincinnati, O. **73.**
Sheffield Velocipede Car Co., Three Rivers, Mich.
Vermont Construction Co. (The), St. Albans, Vt.
Webb, Alfred, & Co., Chattanooga, Tenn.
Weber & Philbrick, Waterville, Me.

Waterproof Joint Tape.

The Okonite Co., 13 Park Row, N. Y. **11.**

Water Wheels and Motors.

Alcott, T. C., & Son, Mount Holly, N. J.
Chase Turbine Mfg. Co., Orange, Mass.
Christiania Machine Co., 206 N. 4th st., Phila., Pa.
Clark Machine Co., Turner's Falls, Mass.
Collins, J. P., & Co., Norwich, Conn.
De Loach, A. A., & Bro., Atlanta, Ga.
De Loach Mill Mfg. Co., Atlanta, Ga.
Duncan, W. P., & Co., Bellefonte, Pa.
Flenniken Turbine Co., Dubuque, Ia.
Forsaith, S. C., Machine Co., Manchester, N.H.
Holmes, P. C., Gardiner, Me.
Holyoke Machine Co., Worcester, Mass.
Howard, Geo. C., 17 S. 18th st., Phila., Pa.; 12 Cortlandt st., N. Y.

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Lane Mfg. Co., Montpelier, Vt.
Leffel, James, & Co., Springfield, O.; 110 Liberty st., N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Mercer, T. B., Westchester, Pa.
Noye, John T., Mfg. Co., Buffalo, N. Y.
Parke & Lacy, 8 California st., San Francisco, Cal.
Poole & Hunt, 7 German st., Baltimore, Md.
Rome Foundry & Machine Works, Rome, Ga.
Smith, S. Morgan, York, Pa.
Stillwell & Bierce Mfg. Co., Dayton, O.
Swartwout, L. B., Three Rivers, Mich. **13.**
Thompson & Campbell, 1030 Germantown av., Phila., Pa.
Truax, J. W., Essex Junction, Vt.
Wood, R. D., & Co., 400 Chestnut st., Phila., Pa.
York Mfg. Co., York, Pa.

Water Wheels, for Electrical Purposes.

Pool & Hunt, Baltimore, Md.
Stillwell & Bierce Mfg. Co., Dayton, O.

Weather Strips for R. R. Cars.

Bosley, D. W., & Co., 273 E. Madison st., Chicago, Ill.
Boss, Frederick C., 130 Fulton st., N. Y.
Bracher Ventilator Co., 153 Fulton st., N. Y.
Browne's, J. W., 14 Dey st., N. Y.
Burnham, Chas., & Co., 117 S. 10th st., Phila., Pa.
Cosper, Wm. H., 19th S. W. c. Blackwell st., Chicago, Ill.
Courtney & Trull, 14 Dey st., N. Y.
Dunfee, J., & Co., 102 E. Washington st., Chicago, Ill.
Gage & Tienken, 27 Barclay st., N. Y.
Gates, P. Tenney, & Son, 39 Dey st., N. Y.
Jacobus, B. D. J., Newark, N. J.
Milliken, T. N., Newcastle, Ind.
Mineralized Rubber Co., 18 Cliff st., N. Y.
New York Weather Strip Co, 14 Barclay st., N. Y.
Patent Metallic Weather Strip Co. (The), 74 W. 23d st., N. Y.
Protective Ventilator Co., 153 Fulton st., N. Y.
Richmond Weather Strip Co., Richmond, Ind.
Roebuck, S., 164 Fulton st., N. Y.
Valentine, Wm. T., & Son, Albany, N. Y.
Vincent, Chas. R., 924 B'way, N. Y.
Vulcanized Fibre Co. Wilmington, Del.; 11 Dey st., N. Y. **96.**
Wellman, Jacob, 1293 B'way, N. Y.

Well Drilling Machinery—Artesian Well Supplies.

American Well Drilling Co., 118 E. Main st., Louisville, Ky. **23.**
American Well Works, Peoria, Ill.
Canton Well Drilling Machine Co., Canton, O.
Chicago Tubular Well Works, Lake and Clinton sts., Chicago, Ill.
Enterprise Drilling Co., 21st, c. Pike st., Pittsburgh, Pa.
Empire Well Auger Co., Ithaca, N. Y.
Gleason & Bailey Mfg. Co. (Ltd.), Seneca Falls, N. Y.
Goulds & Austin, 167-169 Lake st., Chicago, Ill.
Ireland & Hughes, 21st. and A. V. R. R., Pittsburgh, Pa.
Kansas City Frear Stone & Pipe Mfg. Co., Kansas City, Mo.
Livingston, C. E., 839 N. 22d st., Phila., Pa. **93.**
Minneapolis Tubular Well Co., 224 Washington av. n. Minneapolis st., Minn.
New Bedford Cordage Co., New Bedford, Mass.
Oil Well Supply Co. (Ltd.), Bradford, Pa.
Orcutt, Geo. H., 619 Walnut st., Phila., Pa.
Pierce Well Excavator Co., ft. 6th st., Long Island City, L. I.

Well Points—Drive.

Larm, Chas. W. & Co., 84 S. Market st. (Room 21), Chicago, Ill.
Morris Drive Well Point Co. (The), 92 La Salle av., Chicago, Ill.
Olmstead & Co., 75 N. Clinton st., Chicago, Ill.

Wharf Drops.

American Ship Windlass Co., Providence, R. I. **xii.**

Wheelbarrows.

American Steel Scraper Co., Sidney, O.
Atwater & Whitney, Mecklenburg, N. Y.
Belcher, B. & J. W., Chicopee Falls, Mass.
Bodley Bros., New Orleans, La.
Broderick, John, 449 Main st., Louisville, Ky.
Brunson, H. C., & Co., Indianapolis, Ind.
Bryan Mfg. Co., Bryan, O.
Claffy, John, 48 Dey st., N. Y. **90.**
Dubuar, J., & Co., Northville, Mich.
Dreyfus, J. G., & Co., 29 Rose st., N. Y.; 118 E. Lake st., Chicago, Ill.
Fearnley, John, Mfg. Co. (The), 76 Oehler st., Cincinnati, O.
Grand Rapids Wheelbarrow Co, Grand Rapids, Mich.
Harrisburg Car Mfg. Co. (The), Harrisburg, Pa. **7.**
Hatch, Thos., Rome, N. Y.
Kemp & Burpie Mfg. Co., Syracuse, N. Y.
Kilbourne & Jacobs Mfg. Co. (The), 22 E. Broad st., Columbus, O. **2.**
Kretsinger, W. H., & Co., Fort Madison, Iowa.
Lansing Wheelbarrow Co., Lansing, Mich.
Leighton, D. & B., Weare, N. H.
Leighton, C. H., North Weare, N. H.
McWhinnie, Thomas, Poughkeepsie, N. Y.
New York Plow Co. (The), 57 Beekman st., N. Y.
O'Donnell Bros., Jordan, N. Y.
Pugsley & Chapman, 8 Liberty st., N. Y.
Rogers, H. A., 19 John st., N. Y. **iv.**
Revare, E. F., Portsmouth, O.
Rose Mfg. Co., Adrian, Mich.
Royal, W. B., & Co., South Paris, Me.
Sharon Boiler Works, Sharon, Pa.
Smith, S. A., & Co., 219 N. 3d st., Phila., Pa.
Standard Wheelbarrow Co., Portsmouth, O.
Thomas, Geo. W., & Co., Toledo, O.
Tricycle Mfg. Co. (The), Springfield, O.
Walker, E. W., & Co., Goshen, Ind.
Wallace, Franklin W., Cheshire, Conn.
Withington & Cooley Mfg. Co., Jackson, Mich.
Wood, E. D., 88 E. Lake st., Chicago, Ill.

Wheelbarrows—Iron & Steel—Mfrs.

Claffy, John, 48 Dey st., N. Y. **91.**
Kilbourne & Jacobs Mfg. Co., Columbus, O. **2.**
Lansing Wheelbarrow Co., Lansing, Mich.
Obermayer, S. (The), Foundry Supply Mfg. Co., Cincinnati, O.
Pollock, Alex, 212 West st., N. Y. **32.**
Rogers, H. A., 19 John st., N. Y. **iv.**
Stuebner & Woods, 168 E. 3d st., Long Island City, N. Y.
The Tubular Barrow & Machine Co., 169-175 14th st., Jersey City, N. J. **32.**

Wheel Centres—Wrought Iron.

Eckstein & Co., C. G., 32 Liberty st., N. Y.

Wheels—Balance.

Rollstone Iron Foundry, Fitchburg, Mass.

Wheels—Corundum.

Waltham Emery Wheel Co., Waltham, Mass.

Wheels—Driving.

Bass, J. H., Chicago, Ill.
Fulton Foundry, 202 Merwin st., Cleveland, O.
Otis Iron & Steel Co., Cleveland, O.

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Wheels—Engine.

Dickson Mfg. Co., Scranton, Pa.
Ensign Mfg. Co. (The), Huntington, W. Va.
New Haven Wheel Co., New Haven, Conn.

Wheels—Gear.

Fischer Foundry & Machine Co. (Ltd.), S. 21st st. c. Mary st., Pittsburgh, Pa.
Sharon Steel Casting Co., Sharon, Pa.

Wheels—Propeller.

Farrar & Trefts, 54–56 Perry st., Buffalo, N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Neafie & Levy, Beach & Palmer sts., Philadelphia, Pa. **26.**
Skinner & Arnold, 205 B'way, Albany, N. Y.
Trout, H. G., & Co., 226 Ohio st., Buffalo, N.Y.
Willard, Chas. P., & Co., 280-284 Michigan st., Chicago, Ill.

Wheels for Railroad Cars (Manufacturers).

Albany Car Wheel Works, Albany, N. Y.
Allen Paper Car Wheel Co., Pullman, Ill.; 604 Pullman Bldg., Chicago, Ill.; 33 B'way, N. Y.
Allison Mfg. Co. (The), 32d & Walnut st., Philadelphia, Pa.
Allston Car Wheel Co., Allston, Mass.
Andrews, Frank H., 545 W. 33d st., N. Y.
Atlantic Iron Works, Portsmouth, Va.
Atwood Hemp Car Wheel Co., 59 Liberty st., N. Y.
Atwood Railway Wheel Co., 57 Astor h., N. Y.
Baltimore Car Wheel Co. (The), Fulton Junction, Baltimore, Md.
Barney & Smith Mfg. Co., Dayton, O.
Barnum & Richardson Mfg. Co., 64 S. Jefferson st., Chicago, Ill.
Barnum, Richardson & Co., Lime Rock, Conn.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Bass, John H., 97 Dearborn st., Chicago, Ill.
Boles, H. M., Scranton, Pa.
Boles Steel Car Wheel Works (The), Scranton, Pa.; 45 Broadway, N. Y.
Boston Car Wheel Co., 1st & I sts., S. Boston, Mass.
Bouton & Co., 164 Dearborn st. (Room 217), Chicago, Ill.; Aurora, Ill.
Bowler & Co., 14 Winter st., Cleveland, O.
Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Buffalo Car Wheel Works, 537 Louisiana st., Buffalo, N. Y.
Bucyrus, Foundry & Mfg. Co., Bucyrus, O.
Butterworth & Lowe, Grand Rapids, Mich.
Carpenter, Samuel M., 202 Merwin st., Cleveland, O.
Cayuta Wheel & Foundry Co., Sayre, Pa.
Chattanooga Car & Foundry Co., Chattanooga, Tenn.
Chester Steel Castings Co., 407 Library st., Philadelphia, Pa. **46.**
Chicago Car Wheel Co., 164 Dearborn st. (Room 217), Chicago, Ill.
Chicago Tyre & Spring Works, 94 E. Washington st., Chicago, Ill.
Chilled Car Wheel & Plow Factory, Indiana, Pa.
Clendenning, Wm., Montreal, Can.
Cleveland Wheel & Foundry Co., 20 Carter, st., Cleveland, O.
Connellsville Machine & Car Works, Connellsville, Pa.
Cooper Elastic Steel Wheel Co., Cambridgeport, Mass.
Crossen, James, Car Works, Cobourg, Ont.
Davenport & Fairbairn, Erie, P.
Decatur Car Wheel & Mfg. Co., Decatur, Ala.
Detroit Car Wheel Co., 1 Newberry st., Detroit, Mich.
Dickson Mfg. Co., Scranton, Pa.
Eckstein, C. G., & Co., 32 Liberty st., N. Y.
Ellis, W. R., 18 B'way, N. Y.
Ensign Mfg. Co. (The), Huntington, W. Va.
Excelsior Foundry & Machine Works, Birmingham, Ala.
Fargo Car, Wheel & Iron Works Co., Fargo, Dak.
Ford & Kimball, Concord, N. H.
Fowler Steel Car Wheel Co., 185 Dearborn st., Chicago, Ill.
Freas Mfg. Co., Berwick, Pa.
French, A., & Co., 70 Kilby st., Boston, Mass.
Fulton Foundry Co., 202 Merwin st., Cleveland, O.
Gill Car Mfg. Co., Columbus, O.
Green, D. P., & Co., East Cambridge, Mass.
Green's Car Wheel Mfg. Co., 3018 N. B'way, St. Louis, Mo.
Gregory, H. P., & Co., 2 California st., San Francisco, Cal.
Griffin Car Wheel Co., c. F'dry & M. C. R. R., Detroit, Mich.
Griffin, Thos. F., & Sons, 19 Forest av., Buffalo, N. Y.
Griffin Wheel & Foundry Co., 185 Dearborn st., Chicago, Ill.
Hagan Steel Car Wheel Co., Three Rivers, Mich.
Hamilton Standard Wheel Co., Phila., Pa.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Haskel & Barker Car Co., Michigan City, Ind.
Hazleton Iron Works, Hazleton, Pa.
Heartt, Jonas S., & Co., 2d, c. Ida st., Troy, N. Y.
Herbertson, J., & Sons, Brownsville, Pa.
Hodger, E. W., Greenville, Pa.
Hogan & Co., John L., 216 South 4th st., Phila., Pa.
Hortman & Hassert, Bloomsburg, Pa.
Huntingdon Car & Car Wheel Works, Huntingdon, Pa.
Huntington, Hopkins & Co., Junction Bush & Market sts., San Francisco, Cal.
Indianapolis Car & Mfg. Co., Indianapolis, Ind.
Jackson & Woodin, Berwick, Pa.
Jaquett, Thos., Uniontown, Pa.
Jersey City Wheel Foundry & Machine Works (The), 151 Green, c. Pearl st., Jersey City, N. J.
Kansas City Car & Wheel Co., Beals Bldg., Kansas City, Mo.
Keefer, Horace A. & Co., Kansas City, Mo. **88.**
Kingsford Foundry & Machine Works, Oswego, N. Y.
Kingsford, Thos., Oswego, N. Y.
Knoxville Car Wheel Co., Knoxville, Tenn.
Laconia Car Co., Laconia, N. H.
La Fayette Car Works, La Fayette, Ind.
Lake Shore Foundry, Cleveland, O.
Leetonia Foundry Co., Leetonia, O.
Lehigh Car, Wheel & Axle Works, Catasauqua, Pa.
Lindsay, Parvin & Co., 133 S. 4th st., Phila., Pa.
Lima Machine Works, Lima, O.
Litchfield Car & Machine Co., Litchfield, Ill.
Lobdell Car Wheel Co., Wilmington, Del.
Louisville Car Wheel & Railway Supply Co., 1023 E. Jefferson st., Louisville, Ky.
Lynn Iron Works, Birmingham, Ala.
McCaskey Car Wheel Co., New Castle, Pa.
McCullough & Tait, Calais, Me.
McDougall, Geo., Three Rivers, Can.
McKee, Fuller & Co. Catasauqua, Pa.
McOuat & May, Indianapolis, Ind.
Maher & Brayton, 20 Carter st., Cleveland, O.
Mantel Furnace Co., St. Ignace, Mich.
May, Swallow & Co., Milwaukee, Wis.
Marshall Car Wheel and Foundry Co., Marshall, Tex.
Marshall, John, Kittanning, Pa.
Mason Machine Works, Dunkirk, N. Y.; Taunton, Mass.
Michigan Car Co., Detroit, Mich.
Millmore Elastic Steel Car Wheel Co., 53 Dearborn st., Chicago, Ill.

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Missouri Car and Foundry Co., 204 N. 3d st., St. Louis, Mo. **94.**
Mohr, J. J., 1 2 S. 4th st., Phila., Pa.
Moore & Moss, Kansas City, Mo.
Mowry Car Wheel Works, c. Eastern av. and Lewis st., Cincinnati, Mo.
Menzel & Ferguson, c. 3d and 10th avs., S., Minneapolis, Minn.
Munton Steel Car Wheel Co., 94 Washington st., Chicago, Ill.
Nashua Iron & Steel Co., Nashua, N. H. **56.**
Nelsonville Foundry and Machine Co., Nelsonville, O.
New Doty Mfg. Co., Janesville, Wis.
Noble Bros. & Co., Anniston, Ala.
North Western Foundry, Minneapolis, Minn.
Ohio Falls Car Co.; Jeffersonville, Ind.
Ontario Car and Foundry Co, London, Ont.
Otis Iron & Steel Co., Cleveland, O.
Page, Newell & Co., 18 B'way, N. Y.; 139 Milk st., Boston, Mass.
Page Wrought Metal Car Wheel Co., Springfield, Mass.
Paige Car Wheel Co., 211 Superior st., Cleveland, O.
Peacock's Car Wheel Factory, Selma, Ala.
Peckham Car Wheel Co., 239 B'way, N. Y. **6.**
Peninsular Car Works, Detroit, Mich.
Portland Iron Works, Portland, Pa.
Portland Co., Portland, Me.
Prosser, Thomas, & Son (Importers), 15 Gold st., N. Y
Pugh, R. H., 115 Dearborn st., Chicago, Ill.
Ramapo Wheel & Foundry Co, Ramapo, N.Y.
Redsone Foundry, Uniontown, Pa.
Risdon Iron & Locomotive Works, Howard, c. Beale st., San Francisco, Cal.
Rochester Car Wheel Works, 8 Brown's Race, Rochester, N. Y.
Rood & Brown Car Wheel Works, Howard, c. Thomas st., Buffalo, N. Y.
Russell Wheel & Foundry Co., ft. Walker st., Detroit, Mich.
Rutland Foundry & Machine Shop Co., Rutland, Vt.
St. Albans Foundry Co., St. Albans, Vt.
St. Charles Car Co., St. Charles, Mo
St. Louis Car Wheel Co., 207 N. 3d st., St. Louis, Mo.
St. Paul Foundry Co., St. Paul, Minn.
St. Thomas Car Wheel Co., Detroit, Mich.
Sax, J. K., W. Pittston, Pa.
Scoville, T. & N. C., Hamburg st., Buffalo, N. Y.
Sheffield Velocipede Car Co., Three Rivers, Mich.
The Smith Foundry Co., New Philadelphia, Ohio.
Snow, W. W., Ramapo, N. Y.
Standard Steel Works, 220 S. 4th st., Phila., Pa.
Steadman & Co., Aurora, Ind.
Steel Car Wheel Co., 4 P. O. sq., Boston, Mass.
Steiger & Kerr, San Francisco, Cal.
Stewart, Wallace & Weltys, Charleston, S. C.
Stroud & Co., 104 John st., N. Y.
Swartwout, L. B., Three Rivers, Mich. **13.**
Tanyehill Bros. & Co., Peoria, Ill.
Taylor Iron Works, High Bridge, N. J.; 91 Liberty st, N. Y.
Terre Haute Car & Mfg. Co., Terre Haute, Ind.
Thatcher, Geo. H., & Co., Albany, N. Y.
Thomas Steel Tire Wheel Co., Jersey City, N. J.
Thompson, L. P, Bordentown, N. Y.
Treat, C. H., Hannibal, Mo.
Tredegar Iron Works, Richmond, Va.
Union Foundry & Pullman Car Wheel Works, 604 Pullman Bldg., Chicago Ill.
Washburn Car Wheel Co., 66 Suffield st., Hartford, Conn.
Washburn Car Wheel Co., 48 Grafton st., Worcester, Mass.
Washburn Cast Steel Car Wheel Co., Raritan, N. J.
Washburn, Hunts & Co., 375 Warren st., Jersey City, N. J.
Wason Mfg. Co., Springfield, Mass.
Waterville Iron Works, Waterville, Me.
Watson & Stillman, 204 E. 43d st, N. Y.
Watt, J. H., & Bros., Bornesville, O.
Webber & Philbrick, Waterville, Me.
Whitney, A. & Sons, Callowhill, c. N. 16th st., Phila., Pa.
Williams, Djamond & Co., 202 Market st., San Francisco, Cal.
Worcester Steel Works, 18 Bloomingdale st., Worcester, Mass.
Wyoming Valley Mfg. Co., Wilkesbarre, Pa.

Wheels—Car—Cast Iron.

Albany Car Wheel Works, Albany, N. Y.
Andrews, Frank H., 545 W. 33d st, N. Y.
Atlantic Iron Works (W. A. Anderson), Norfolk, Vt.
Barney & Smith Mfg. Co., Dayton, O.
Barnum-Richardson Mfg. Co., Chicago, Ill.
Bass Foundry & Machine Works, Fort Wayne, Ind.
Bass, S. H., Chicago, Ill.
Boston Standard Wheel Co., Boston Mass.
Bouton & Co., Chicago, Ill.
Buffalo Car Wheel Works, Buffalo, N. Y.
Butterworth & Lowe, Grand Rapids, Mich.
Cayuta Wheel & Foundry Co., Sayre, Pa.
Cleveland Wheel & Foundry Co. (Maher & Brayton), Cleveland, O.
Connellsville Machine Car Works, Connellsville, Pa.
Davenport & Fairbairn, Erie, Pa.
Decatur Car Wheel & Mfg. Co., Decatur, Ala.
Detroit Car Wheel Works, Detroit, Mich.
Doty Mfg. Co., Janesville, Wis.
Ford & Kimball, Concord, N. H.
Gill Car Mfg. Co., Columbus, O.
Green's Car Wheel Mfg. Co., St. Louis, Mo.
Griffin Wheel & Foundry Co., Chicago, Ill.
Harman & Hassert, Bloomsburg, Pa.
Harrisburg Car Mfg. Co., Harrisburg, Pa. **7.**
Harrisburg Iron Works (John Allison & Co.), Hazleton, Pa.
Haskell & Barker Car Co., Michigan City, Ind.
Heartt (Jonas S.) & Co., Troy, N. Y.
Hodge Mfg. Co. (Ltd.), Greenville, Pa.
Huntingdon Car & Car Wheel Works, Huntingdon, Pa.
Indianapolis Car & Mfg. Co., Indianapolis, Ind.
Jackson & Woodin Mfg. Co., Berwick, Pa.
Kingsford, Thos., Oswego, N. Y.
Knoxville Car Wheel Co., Knoxville, Tenn.
Laconia Car Co., Laconia, N. H.
Lehigh Car Wheel & Axle Works (McKee, Fuller & Co.), Catasauqua, Pa.
Litchfield Car & Machine Co., Litchfield, Ill.
Louisville Car Wheel & Railway Supply Co., Louisville, Ky.
Marshall Car Wheel & Foundry Co., Marshall, Tex.
Marshall, John, Kittanning, Pa.
Mason Machine Works, Taunton, Mass.
May, Swallow & Co., Milwaukee, Wis.
Menzel & Ferguson, Northwestern Foundry, Minneapolis, Minn.
Missouri Car & Foundry Co., St. Louis, Mo. **94.**
Moore & Moss, Kansas City, Mo.
Mowry Car Wheel Works, Cincinnati, O.
McCarkey Car Wheel Co., New Castle, Pa.
McKee, Fuller & Co, Catasauqua, Pa.
Nelsonville Foundry & Machine Co., Nelsonville, O.
Noble Bros., & Co., Anniston, Ala.
N. Y. Car Wheel Works, Buffalo, N. Y.
Ohio Falls Car Co., Jeffersonville, Ind.
Peacock, Geo., Selma, Ala.
Peninsular Car Co., Detroit, Mich.
Portland Co., Portland, Me.
Redstone Foundry, Uniontown, Pa.
Risdon Iron & Locomotive Works, San Francisco, Cal.
Rutland Foundry & Machine Shop Co., Rutland, Vt.,
Russell Wheel & Foundry Co., Detroit, Mich
Rochester Car Wheel Co., Rochester, N. Y.
Rood & Brown, E. Buffalo, N. Y.

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Sax, J. K., Pittston, Pa.
Steadman & Co., Aurora, Ind.
Steiger & Kerr, 137 1st st, San Francisco, Cal.
St. Albans Foundry, St. Albans, Vt.
St. Charles Car Co., St. Charles, Mo.
St. Louis Car Wheel Co., St. Louis, Mo.
St. Paul Foundry Co., St. Paul, Minn.
Swartwout, L. B., Three Rivers, Mich. **13.**
Terre Haute Car & Mfg. Co., Terre Haute, Ind.
Thatcher, Geo. H., & Co., Albany, N. Y.
Thompson, L. P., Bordentown, N. J.
Treat, C. A., Mfg. Co., Hannibal, Mo.
Tredegar Iron Works, Tredegar Co., Richmond, Va.
Union Foundry & Pullman Car Wheel Works, 212 Pullman Bldg., Chicago, Ill.
Washburn-Hunts Co., Jersey City, N. J.
Wason Car & Foundry Co., Chattanooga, Tenn.
Wason Mfg. Co., Worcester, Mass.
Worcester Steel Co., Worcester, Mass.

Wheels—Car—Crucible Steel Tired.

Washburn Car Wheel Co., Hartford, Conn.

Wheels—Car—Chilled.

Barnum, Richardson Co., Lime Rock, Conn.
Ensign Mfg. Co., Huntington, W. Va.
Fulton Foundry Co., Cleveland, O.
Lobdell Car Wheel Co., Wilmington, Del.
McCullough & Tait, Calais, Me.
Portland Co., Portland, Me.
Portland Iron Works, Portland, Me,
Ramapo Wheel Foundry Co., Ramapo, N. Y.
Taylor Iron Works, High Bridge, N. J.

Wheels—Car—Chilled Cast Iron & Steel Tired.

Baltimore Car Wheel Co., Fulton Junction, Baltimore, Md.
Chicago Car Wheel Co., Chicago, Ill.
Cleveland Foundry (Bowler & Co.), Cleveland, Ohio.
Griffin Car Wheel Co., Detroit, Mich.
Lima Machine Works, Lima, O.
Ramapo Wheel & Foundry Co., Ramapo, N.Y.
Taylor Iron Works, High Bridge, N. Y.
Whitney, A., & Son, Callowhill and 16th sts., Phila., Pa.

Wheels—Car—Hemp.

Atwood Hemp Car Wheel Co., N. Y.

Wheels (Car)-Interlocking Steel Tired.

Sax, J. K., Pittston, Pa.

Wheels—Car and Locomotive

Alabama Car Works (The), Anniston, Ala.
Baltimore Car Wheel Co. (The), Fulton Junc., Baltimore, Md.
Barney & Smith Mfg. Co., Dayton, O.
Barnum, Richardson Co., Lime Rock, Conn.
Bass, J. H., 97 Dearborn st., Chicago, Ill.
Boles Steel Car Wheel Works (The), Scranton, Pa.; 45 B'way, N. Y.
Bowler & Co., 10-24 Water st., Cleveland, O.
Chester Steel Casting Co., 407 Library st., Phila., Pa. **46.**
Cleveland Wheel & Foundry Works, 20 Carter, st., Cleveland, O.
Decatur Car Wheel & Mfg. Co., New Decatur, Ala.
Dickson Mfg. Co., Scranton, Pa; 112 Liberty st., N. Y.
Eckstein, C. D., & Co, 32 Liberty st., N. Y.
Ensign Mfg. Co. (The), Huntington, W. Va.
Fulton Foundry 202 Merwin st., Cleveland, O.
Griffin Car Wheel Co., Detroit, Mich.
Griffin Wheel & Foundry Co., Chicago, Ill.
Griffin, Thos. F., & Sons, Buffalo, N. Y.
Harrisburgh Car Mfg. Co., Harrisburgh, Pa. **7.**
Kansas City Car & Wheel Co., Beals Bldg., Kansas City, Mo.
Knoxville Car Wheel Co., Knoxville, Tenn.
Lake Shore Foundry, ft. Alabama st., Cleveland, O.
Lima Machine Works, Lima, O.
Litchfield Car & Machine Co Litchfield, Ill.
Lobdell Car Wheel Co., Wilmington, Del.
McKee, Fuller & Co., Catasauqua, Pa.
Mengis, M. C., 12 B'way, N. Y.
Missouri Car & Foundry Co., 204 N. 3d st., St. Louis, Mo. **94.**
Mowry Car Wheel Works, 27½ W. 3d st., Cincinnati, O.
Paige Car Wheel Co., 211 Superior st., Cleveland, O.
Peckham Car Wheel Co., 239 B'way, N. Y. **6.**
Ramapo Iron Works, Hillburn, N. Y.
Ramapo Wheel & Foundry Co., Ramapo, N. Y.; 115 B'way, N. Y.
Rood & Brown, Buffalo, N. Y.
St. Louis Car Wheel Co., Chamber of Com. Bldg., St. Louis, Mo.
Sax, J. K., West Pittston, Pa.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Snow, W. W., Ramapo, N. Y.
Standard Steel Works, 220 S. 4th st., Phila., Pa.
Steel Car Wheel Co., 4 P. O. sq., Boston, Mass.
Stroud & Co., 104 John st., N. Y.
Taylor Iron Works, High Bridge, N. J.
Tredegar Iron Works, Tredegar Co., Richmond, Va.
Wason Mfg. Co., Springfield, Mass.
Whitney, A., & Sons, Phila., Pa.

Wheels—Lumber Car.

Lombard, Geo. R., Augusta, Ga.

Wheels—Mine Car.

Ensign Mfg. Co. (The), Huntington, W. Va.
Montour Iron & Steel Co. (The), 216 S. 3d st., Phila., Pa.

Wheels (Car)—Paper.

Allen Paper Car Wheel Co., Chicago, Ill.; 33 B'way, N. Y.
Peckham Car Wheel Co., 239 B'way, N. Y. **6.**

Wheels (Car)—Paper and Wood.

Kalamazoo Railroad Velocipede Co., Kalamazoo, Mich.

Wheels (Car)—Rolled Steel.

Fowler Steel Car Wheel Co., 185 Dearborn st., Chicago, Ill.

Wheels—Rubber Covered.

Boston Rubber Co., 63 Franklin st., Boston, Mass.
Childs, H. L. & Co., 8 Smithfield st., Pittsburgh, Pa.
Cleveland Rubber Co., C. & P. and Nickel Plate R. R., Cleveland, O.
Gutta Percha & Rubber Mfg. Co., 35 Warren, c. Church st., N. Y.
New York Belting & Packing Co., 15 Park Row, N. Y. **v.**

Wheels (Car)—Second Hand.

Logan, James H., Penn Bldgs., Pittsburgh, Pa. **53.**
Pope & Bro., Thos. J., 292 Pearl st., N. Y.

Wheels (Car)—Self-Oiling.

Eagle Iron Works, Terre Haute, Ind.
Peacock, Geo., Selma, Ala.

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Wheels Car—Self-Oiling Chilled Iron.

Bucyrus Foundry and Mfg. Co., Bucyrus, O.
Watt Mining Car Wheel Co., Barnesville, O.

Wheels (Car)—Steel.

Barnum, Richardson Co., Salisbury, Conn.
Boies Steel Car Wheel Works (H. M. Boies), Scranton, Pa.; 45 B'way, N. Y.
Brooks Locomotive Works, Dunkirk, N. Y. **17.**
Cayuta Wheel and Foundry Co., Sayre, Pa.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Fowler Steel Car Wheel Co, 185 Dearborn st., Chicago, Ill.
Lobdell Car Wheel Co., Wilmington, Del.
McKee, Fuller & Co., Catasauqua, Pa.
Miltimore Elastic Steel Car Wheel Co., Arlington, Vt.
Munton Steel Car Wheel Co., Chicago, Ill.
Page, Newell & Co, 18 B'way, N. Y.; 139 Milk st., Boston, Mass.
Plano Steel Works, Plano, Ill.
Sheffield Velocipede Car Co., Three Rivers, Mich.
Steel Car Wheel Co., 4 P. O. sq., Boston, Mass.
Swartwout, L. B., Three Rivers, Mich. **13.**
Washburn Cast Steel Car Wheel Co., Raritan, N. J.
Worcester Steel Works, Worcester, Mass.

Wheels (Car)—Steel Tired, Plate and Spoke.

Paige Car Wheel Co., 211 Superior st., Cleveland, O.

Wheels (Car)—Steel Tired.

Jersey City Wheel Foundry and Machine Works, Jersey City, N. J.
McKee, Fuller & Co., Catasauqua, Pa.
Nashua Iron and Steel Co., Nashua, N H. **56.**
Prosser & Son, Thos., 15 Gold st., N. Y.
Ramapo Wheel & Foundry Co., Ramapo, N. Y.
Snow, W. W., Ramapo, N. Y.
Steel Car Wheel Co. 4 P. O. sq., Boston, Mass.
Taylor Iron Works, High Bridge, N. J.

Wheels—Street Car.

Andrews, Frank N., 545 W. 33d st., N. Y.
Baltimore Car Wheel Co. (The), Balt., Md.
Bemis Car Box Co., Springfield, Mass.
Bowler & Co., 10-24 Winter st., Cleveland, O.
Brill, J. G. Co., Phila., Pa.
Brownell & Wight Car Co., 2300 B'way, St. Louis, Mo.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Cleveland Wheel and Foundry Works, 20 Carter st., Cleveland, O.
Decatur Car Wheel and Mfg. Co., New Decatur, Ala.
Dederick, Z. P., Sherman, Tex.
Domner & Dutton, 14 Winter st., Cleveland, O.
Foote, Orlo A., Cleveland, O.
Fulton Foundry, 22 Merwin st., Cleveland, O.
Griffin Wheel and Foundry Co., Robey st. and Blue Island av., Chicago, Ill.
Griffin, Thos. F. & Son, Buffalo, N. Y.
Hadfields Steel Foundry Co., Attercliffe, Sheffield, Eng.
Howard, Childs & Co., Hamilton Bldg., Pittsburgh, Pa.
Horace A. Keefer Co. (The), Kansas City, Mo. **88.**
Knoxville Car Wheel Co., Knoxville, Tenn.
Laclede Car Co., 4500 N. 2d st., St. Louis, Mo.
Lewis & Fowler Mfg. Co. (The), 27-35 Walworth st., B'klyn, N. Y.
Lobdell Car Wheel Co., Wilmington, Del.
Louisville Car Wheel and Ry. Supply Co., Louisville, Ky.
Meysenburg, O. W. & Co., 204 N. 3d st., St. Louis, Mo.
Miller & Co., Edinburgh, Scotland.
Milmine, H. B. & Co., Toledo, O.
Peckham Car Wheel Co. (The), Syracuse, N. Y.; 239 B'way, N. Y. **6.**
Pugh & Russell, Stewart Bldg., N. Y.
St. Thomas Car Wheel Co., St. Thomas, Ont.
Stephenson, John Co. (Ltd.), 47 E. 27th st., N. Y.
Street Ry. Supply Co., Cleveland, O.
Whitney, A. & Sons, Phila., Pa.

Wheels—Steering.

Boston & Lockport Block Co., Boston, Mass. **90.**
Dickson Mfg. Co., Scranton, Pa.*
Greacen, S. B., Perth Amboy, N. J.

*Whistles—Street Car Drivers.

Martin, Rufus & Co., 114 Nassau st., N. Y. **52.**

Whistles—Steam (Manufacturers).

American Steam Gauge Co., 36 Chardon st., Boston, Mass.
Ashcroft Mfg. Co. (The), 111 Liberty st., N. Y.
Atwood & McCaffrey, 60 3d av., Pittsb'gh, Pa.
Bailey, Farrell & Co., 619 Smithfield st., Pittsburgh, Pa.
Belfield, H., & Co., 435 N. Broad st., Phila., Pa.
Brown & King, 63 S. Broad st., Atlanta, Ga.
Chisholm, Wm., & Sons, Cleveland, O.
Crosby Steam Gauge & Valve Co., 97 Oliver st., Boston, Mass.
Dickson Mfg. Co., Scranton, Pa.
Fullmer, A. J., & Co., Camden, N. J.
Garratt, W. T., & Co., Fremont st., San Francisco, Cal.
Green, W. H., Chester, Pa.
Hess, Chas., Bloomfield, N. J.
Kaye & Co., 132 Water st., Louisville, Ky.
Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
McNab & Harlin Mfg. Co., 56 John st., N. Y.
Ostrander, W. R., & Co., 21-25 Ann st., N. Y.
Paul, Geo. K., & Co., 98 Milk st., Boston, Mass.
Springfield Brass Co. (The), 80-84 Limestone st., Springfield, O.

White Lead Manufacturers.

Acme White Lead & Color Works, 310 Grand River av., Detroit, Mich.
Adams, J. C., 22 E. Lombard st., Balt., Md.
American White Lead Co., 1204 8th st., Louisville, Ky.
Anchor White Lead Co., 40 Culvert st., Cincinnati, O.
Armstrong, D. R., & Co., 105 Fulton st., Chicago, Ill.
Armstrong & McKelvy, 115 Wood st., Pittsb'gh, Pa.
Atlantic White Lead & Linseed Oil Co., 287 Pearl st., N. Y.
Atlantic White Lead Co., Marshall, n. Gold st., B'klyn, N. Y.
Baker Bros. & Co., 36 S. Charles st., Balt., Md.
Banker, G. W., 1 Platt st., N. Y.
Battelle & Renwick, 163 Front st., N. Y.; Saugerties, N. Y.; Glasco, N. Y.
Baxter, Wm. M. & Co., 178 Front st., N. Y.
Beymer, Bauman & Co., Pittsburgh, Pa.; Pennsylvania av. and Bidwell st., Allegheny, Pa.
Blanding, Wm. B., 54-58 Weybosset st., Providence, R. I.
Boston Lead Mfg. Co., 162 Congress st., Boston, Mass.
Boydell Bros., 18 Congress st., Detroit, Mich.
Bradley White Lead Co., 174 Front st., B'klyn, N. Y.
Briggs, John & Co., 31 Batterymarch st., Boston, Mass.
Brockett Zinc and Paint Co. (The), Superior, c. Water st., Cleveland, O.
Brooklyn White Lead Co., 182 Front st., N. Y.
Burdsall, Alfred, 34 S. Meridian st., Indianapolis, Ind.
Carpenter, Woodward & Morton, 151 Milk st., Boston, Mass.
Carter White Lead Co., Omaha, Neb.
Chadwick Lead Works, 173 High st., Boston, Mass.

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Chambers Lead Co., Davis, 18 Burling sl., N. Y.
Chicago White Lead and Oil Co., N. Green, c. Fulton st., Chicago, Ill.
Childs, Chas. M. & Co., 225 Pearl st., N. Y.
Chilton Mfg. Co., 147 Fulton st., N. Y.; 141 Milk st., Boston, Mass.
Collier White Lead and Oil Co., 1 Platt st., N.Y.; 92 S. Franklin st., Chicago, Ill.; Clark av., c. 10th st., St. Louis, Mo.
Cornell Lead Co., Va. st., c. Del. av., Buffalo, N. Y.
Connors, William, 171 Hill st., Troy, N. Y.
Dauchy, C. H., 273 River st., Troy, N. Y.
Davidson & Blondell, 51 Barclay st., N. Y.
Davis-Chambers Lead Co., 18 Burling sl., N. Y.; 55 10th st., Pittsburgh, Pa.
Davis, James E. & Co., 29-35 Larned st., Detroit, Mich.
Detroit White Lead Works, 101 Jones st., Detroit, Mich.; 216 Washington st., Buffalo, N. Y.
Devoe, F. W. & Co., 101 Fulton st., N. Y.
Dodds, John J. & Co., 51-53 Shelby st., Detroit, Mich.
Eagle White Lead Co., 20 Spring st., Cincinnati, Ohio.
Eckstein White Lead Co, 235 E. Lake st., Chicago, Ill.; 159 Milk st., Boston, Mass.; S. W. c. 7th st. and Freeman av., Cincinnati, O.
Ellicott, W. M. & Sons, 204 Spears' whf., Balt. Md.
Fahnestock White Lead Co., 957 Liberty av., Pittsburgh, Pa.
Felton, Rau & Sibley, 136-140 N. 4th st., Pittsburgh, Pa.
Forest River Lead Co., Salem, Mass.
Franklin White Lead Co., 212 Race st., Phila., Pa.
French, S. H. & Co., York av., 4th and Callowhill sts., Phila., Pa.
Gautert, Paul, 514 3d av., N. Y.
Gebhart, J. & Co., Dayton, O.
Gerdes, F. W. & Bro., 1006 Penn av., Pittsburgh, Pa.
Germania Lead Works, 220 California st., San Francisco, Cal.
Girard White Lead, Zinc and Color Works, 123 Arch st., Phila., Pa.
Gould & Co., 69 Union st., Boston, Mass.
Harrison Bros. & Co., 117 Fulton st., N. Y.; Gray's Ferry rd., c S. 35th st., Phila., Pa.
Heath & Mulligan Mfg. Co., 170 E. Randolph st., Chicago, Ill.
Howell, Chas. & Co., 212 Race st., Phila., Pa.
Interior White Lead Mfg. Co., 155 Washington st., Chicago, Ill.
Jewett White Lead Co., 28 Burling sl., N. Y.
John, E. C., Evansville, Ind.
Johnston Mfg. Co., 277 S. Canal st., Chicago, Ill.
Joplin White Lead Co., Joplin, Mo.
Kansas City White Lead and Linseed Oil Co., Kansas City, Mo.
Kentucky Lead and Oil Co., 9th and Water sts., Louisville, Ky.
King, D. W. & Co., 166 168 High st., Boston, Mass.
King, W. & Bro., 2 N. Liberty st., Balt., Md.
Lawrence, W. W. & Co., Water st., n. Penna. av., Pittsburgh, Pa.
Lewis, John T. & Bros., 231 S. Front st., Phila., Pa.
London White Lead Co. (The), 26-28 Potter st., Hartford, Conn.
Long Island White Lead Works, King st, n. Ferris st., B'klyn, N. Y.
Lucas, John & Co, 89 Malden la., N Y.; 141 N. 4th st., Phila., Pa.
McBirney & Johnston, W. 16th, c. Brown st. Chicago, Ill.
McDonagh, Wm. & Co., 180 Front st, N. Y.
McDonald, J. A. & Co., Kansas City, Mo.
Maryland White Lead Co., 35 Post Office av., Balt., Md.
Marzolf, A., 536 W. 14th st., N. Y.
Masury, John W. & Son, 93 Nassau st., N. Y.
Maxwell White Lead Co., Pacific Junc., n. W. North av. (Pacific P. O.), Chicago, Ill.
Mevin, T. H. & Co., Gratiot and Western aves., Allegheny, Pa.
Morley, J. H., Lead Co. (The), Junc. Canal and Champlain st., Cleveland, O.
Moser, Chas. & Co., 61 Main st., Cincinnati, O.
New England Glass Works, 155 Franklin st., Boston, Mass.
New Orleans White Lead and Color Works, New Orleans, La.
N. Y. City White Lead Works, 51 Barclay st., N. Y.
Nichol, John & Co., King, n. Ferris st., B'klyn, N. Y.
Osgood & Brigham, 7 Front st., Rochester, N. Y.
Pacific Oil & Lead Works, 202 California st., San Francisco, Cal.
Peale, W. C. & Bro., 332-334 Central av., Cincinnati, O.
Pease, F. S., 65-67 Main st., Buffalo, N. Y.
Peninsular White Lead and Color Works, Wight, c. Lieb st., Detroit, Mich.
Pennsylvania White Lead Co., Room 20, Lewis Block, Pittsburgh, Pa.
Pioneer White Lead Works, San Francisco, Cal.
Reynolds, C. T. & Co, 106-108 Fulton st., N. Y.
Rouley, C., 27 N. Western av., Chicago, Ill.
St. Louis Lead and Oil Co., 92 S. Franklin st., Chicago, Ill.; 2d st., c. Cass av., St. Louis, Mo.
Salem Lead Co., 21 Pearl st., Boston, Mass.
Shipman, D. B., 1510 S. State st., Chicago, Ill.
Smith, G., 20 Sloan st., Chicago, Ill.
Southern White Lead Co., 206 W. 18th st, Chicago, Ill.; Main, c. Lombard st., St. Louis, Mo.
Southwest Lead and Zinc Co., Joplin, Mo.
Suydam, M. B. & Co., 450-484 Rebecca st., Allegheny, Pa.
Troy Paint and Color Works, 171-173 Hill st., Troy, N. Y.
Ulster White Lead Co., 163 Front st., N. Y.; 69 Union st., Boston, Mass.
Union White Lead Mfg. Co., 26 Burling sl., N. Y.
U. S. White Lead and Color Co. (Ltd.), 2415 E. Huntington st., Phila., Pa.
Vane-Calvert Paint Co., 201 E. Randolph st., Chicago, Ill.
Walker Paint Co. (The), 152-154 Court st., Cincinnati, O.
Wells, C. F. & Co., Pittsburgh, Pa.
Western Paint and Roofing Co. (The), 25 Main st., Cincinnati, O.
Western White Lead Co., 1801 Hancock st., Phila., Pa.
Wetherill & Brother, 31st, bl. Chestnut st., Phila., Pa.
Whittier, Fuller & Co., 229 Fremont st., San Francisco, Cal.
Wiley & Richardson, 84-92 Sudbury st., Boston, Mass.
Wilhelm, A., Reading, Pa.
Willard & Lane, Taunton, Mass.
Wiswall, W. McA., 2413 E. Huntingdon st., Phila., Pa.
Wright & Lawther Oil and Lead Mfg. Co., 45 W. Polk st., Chicago, Ill.

Whiting Manufacturers.

American Whiting Co., Louisville, Ky.
Barbour, A. E., 36 Beekman st., B'klyn, N. Y.
Budd, John J., 149 Bank st., N. Y.
Buel, Arthur, 4 Burling sl., N. Y.
Clarke, W. W. & Son, 61 S. Gay st., Baltimore, Md.
Dunham, Thos. C., 68 Murray st., N. Y.
Fuller, Richardson & Co., Hallowell, Me.
Grafley & Bro., 2527 E. York st., Phila., Pa.
Hammill & Gillespie, 240 Front st., N. Y.
Hasse, C., 126 S. 2d st., Phila., Pa.
Hasse, G. W., 2511 E. Thompson st., Phila., Pa.
Holt & Duncan, 2616 E. Cumberland st., Phila., Pa.
Jones, Shaeffer & Carroll, 1750 N. Front st., Phila., Pa.
Kelly Bros & Spielman, Swanson, c. Moore st., Phila., Pa.
Koster, John N., 613 W. 39th st., N. Y.
Malone, Frank & Co., 540 W. 15th st., N. Y.

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Pennsylvania Whiting Co. (Ltd.), 2527 E. York st., Phila., Pa.
Penn Whiting Co. (Ltd.), York, c. Almond st., Phila., Pa.
Phillips & Ferguson, 48 Beekman st., N. Y.
Pratt, W. S., 2609 E. York st., Phila., Pa.; 197 Maverick st., E. Boston, Mass.
Richmond Refining Works, E. Thompson, n E. Cumberland st., Phila., Pa.
Richmond Whiting Works, 2514 E. Cumberland st., Phila., Pa.
Southwark Mfg. Co. (The) (Ltd.), 1535 S. 7th st., Phila., Pa.
Stannard, Geo., 159 Front st., N. Y.
Stickney, J. W., & Co., 64 Broad st., N. Y.
Taintor, H. F., 281 Pearl st., N. Y.
Truslow & Co., 219 Pearl st., N. Y.
Weddle, W. B., 83 Maiden la., N. Y.
Wetherill, S. P. Co. (The) (Ltd.), 112 John st., N. Y.
Zeiger, C., 208 N. 9th st., B'klyn, N. Y.

Wicks (Lamp)—Manufacturers.

American Mills Co. (The), 55 Leonard st., N. Y
American Wick Mfg. Co., 26 B'way, N. Y.
Botsford & Lacy, 52 Park pl., N. Y.
Brundage, Edw. H., 118 Chambers st., N. Y
Daniels Mfg. Co., Hartford, Conn.
Darrow, A. R., New London, Conn.
Doud's, John, Sons, 59 Murray st., N. Y.
Fletcher Mfg. Co., 18-20 Thomas st., N. Y.; 119 Franklin st., Boston, Mass.
Nawrath, J. P., & Co., 2 Lispenard st., N. Y.
Potter, W. R., Mill st., Taunton, Mass.
Robinson & Hall, 517 3d av., N. Y.
Schneider, C. A., 436 E. 17th st., N. Y.

Windmills, Tanks, Etc.

Brennan & Colligan, 20 Burling sl., N. Y.
Brower, Jacob D., 38 College pl., N. Y.
Buchanan Windmill Co., Buchanan, Mich.
Challenge Wind Mill & Feed Mill Co., Batavia, Ill.
Chicago Tubular Well Works, Lake & Clinton sts., Chicago, Ill.
Corcoran, Andrew J., 76 John st., N. Y.
Freeport Machine Co., Freeport, Ill.
Perkins Wind Mill and Ax Co., Mishawaka, Ind.
Pierce Artesian and Oil Well Supply Co., 80 Beaver st, N. Y.
Wilkens, Henry, 441 West st., N. Y.

Windlasses and Capstans—Steam Attachments.

American Ship Windlass Co., Waterman and River sts., Providence, R. I. **xii.**

Windlasses—Ship, Steam and Yacht.

American Ship Windlass Co., Waterman and River sts., Providence, R. I. **xii.**
Butler, J. A. & Co., 225 Atlantic av., Boston, Mass.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Knowlton Bros., Camden, Me.
Manton Windlass and Steam Steerer Co. (The), Providence, R. I.
New York Plow Co. (The), 57 Beekman st., N. Y.
Providence Steam Engine Co., Providence, R. I.
Russell, A. & Sons, Newburyport, Mass.

Wire—Barb.

American Barb Wire Co., 310 S. 21st st., St. Louis, Mo.
American Fencing Co., 234 W. 29th st., N. Y.
Ashley Wire Co., Joliet, Ill.
Ayres & Decker Mfg. Co., Keokuk, Ia.
Buffalo Barb Wire Co., 220 Main st., Buffalo, N. Y.
Cambria Iron Co., 218 S. 4th st., Phila., Pa.; Works at Johnstown, Pa. **2.**
Carpenter, Wm. L., Des Moines, Ia.
Continental Wire Co., St. Louis, Mo.
Coombs, C. & Co., St. Louis, Mo.
Crescent Mfg. Co., St. Louis, Mo.
Dayton & Lamb, 497 W. Madison st., Chicago, Ill.
Dillman & Knowlton Mfg. Co., Joliet, Ill.
Elwood, I. L. & Co., De Kalb, Ill.
Frichs, Henry, St. Louis, Mo.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Globe Barb Wire Co., Manchester, Ia.
Greeley, E. S. & Co., 7 Dey st., N. Y.
Haish Jacob & Co., De Kalb, Ill.
Harris & Smith, Janesville, Wis.
Hawkeye Steel Barb Fence Co., Burlington, Vt.
Hazard Mfg. Co., Wilkesbarre, Pa.
Hill, P. P., Rochelle, Ill.
Illinois Wire Fence Co., Joliet, Ill.
Indiana Wire Fence Co., Crawfordsville, Ind.
Iowa Barb Wire Co., 98 Reade st., N. Y.
Iowa Barb Steel Wire Co., Marshalltown, Ia.
Janesville Barb Wire Co., Janesville, Wis.
Joliet Enterprise Co., Joliet, Ill.
Joliet Barb Wire Co., Joliet, Ill.
Kansas City Barb Wire Co., Kansas City, Mo.
Kelly Barb Wire Co., Chicago, Ill.
Ludlow-Saylor Wire Co., 110 S. 4th st., Phila., Pa.
McCosh Iron and Steel Co., Burlington, Vt.
Merchants' Union Barb Wire Co., Des Moines, Iowa.
Monson Mfg. Co., Lee, Ill.
Northwestern Barb Wire Co., Sterling, Ill.
Norton & DeWitt, Lockport, Ill.
Ohio Steel Barb Fence Co., Cleveland, O.
Omaha Barb Wire Co., Omaha, Neb.
Rock Falls Barb Wire Co., Rock Falls, Ill.
Sandwich Enterprise Co., Sandwich, Ill.
Schnabel & Co., 51 Dearborn st., Chicago, Ill.
Schreffler & Van Fleet, Joliet, Ill.
Scott, H. B. & Co., Pittsburgh, Pa.
Sherman & Marsh, Grand Crossing, Ill.
Southern Wire Co., St. Louis, Mo.
Superior Barb Wire Co., De Kalb, Ill.
Thorn Wire Hedge Co., Chicago, Ill.
Trentress Barbed Wire Fence Co., E. Dubuque, Ia.
Washburn & Moen Mfg. Co., Worcester, Mass.
Watkins Barbed Fence Co., Joliet, Ill.

Wire Billets.

Eagle Iron Works (Curtins & Co.), Roland, Pa.
Worcester Steel Works, Worcester, Mass.

Wire for Bolts.

Milesburg Iron Works (McCoy & Linn), Milesburg, Pa.

Wire—Brass and Copper.

Ansonia, Brass and Copper Co., 19 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Brand Mfg. Co. (The), New Britain, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Brooklyn Brass and Copper Co., B'klyn, N. Y.
Cabble, Wm., Excelsior Wire Mfg. Co., 43 Fulton st., N. Y.
Chesline Brass Co., West Chesline, Conn.
Coe Brass Mfg. Co., Torrington, Conn.
Detroit Copper and Brass Rolling Mills, Detroit, Mich.
De Witt Wire Cloth Co., 87 Chambers st., N. Y.
Eastwood Wire Mfg. Co., Belleville, N. J.
Globe Rolling Mill Co., Cincinnati, O.
Greeley, E. S. & Co., 7 Dey st., N. Y.
Griggs, E. D., 61-63 Duane st., N. Y.
Hartley, Geo., Waterbury, Conn.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Hendricks Bros., 49 Cliff st, N. Y.; Belleville, N. J.
Holmes, Booth & Haydens, Waterbury, Conn.; 25 Park pl., N. Y.
Lockwood, D. & J., Cannon's Station, Conn.
Manhattan Brass Co., 469 1st av., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.

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Osborne & Cheesman Co., Ansonia, Conn.
Plume & Atwood Mfg. Co., 71 Pearl st., Boston, Mass.; Waterbury, Conn.; Thomaston, Me.
Roebling's, John A., Sons Co., 117-119 Liberty st., N. Y. **8.**
Rome Iron Works, Rome, N. Y.
Scovill Mfg. Co., Waterbury, Conn.
Staniar & Laffey, East Newark, N. J.
Wallace & Sons, 71 Reade st., N. Y.
Washburn & Moen Mfg. Co., Worcester, Mass.; 16 Cliff st., N. Y.
Waterbury Brass Co., Waterbury, Conn.

Wire—Cable.

Hazard Mfg. Co., Wilkesbarre, Pa.
Jaques & Eustis, Cambridgeport, Mass.
Whitten & Lascell, 13 State st., Lynn, Mass.

Wire Cables for Street Railways.

Broderick & Bascom Wire Rope Co., St. Louis, Mo.
Bullivant & Co., 72 Mark Lane, London, E. C., England.
Cable Railway Co., 329 Market st., San Francisco, Cal.
Roebling's, John A., Sons Co., Trenton, N. J. **8.**
Washburn & Moen Mfg. Co., Worcester, Mass.

Wire—Copper (Insulated and Bare).

Ansonia Brass and Copper Co., 64 E. Washington st., Chicago, Ill.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bishop Gutta Percha Co., 420-426 E. 25th st., N. Y.
Moore, Alfred F., 200-204 N. 3d st., Phila., Pa.
Phillips, E. B. & Co., 374 Broad st., Pawtucket; R. I.

Wire—Electric.

American Electrical Works, 67 Stewart st., Providence, R. I.
Ansonia Brass and Copper Co., Ansonia, Conn.; 19 Cliff st., N. Y.; 64 Washington st., Chicago, Ill.
Baker & Co., 406 N. J. R. R. av., Newark, N. J.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Benson & Thompson, 3015 Chestnut st., Phila., Pa.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Bridgeport Brass Co., Bridgeport, Conn.; 19 Murray st., N. Y.
Bridgeport Electric Mfg. Co., Bridgeport, Conn.
Bunnell, J. H., & Co., 106 Liberty st., N. Y.
Callendar Insulating & Waterproofing Co., 45 B'way, N. Y.; Chicago; Boston.
Campbell Electric Supply Co., 95 Milk st., Boston, Mass.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Clark Insulated Electric Wire Co., 419 Walnut st., Phila., Pa.
Coe Brass Mfg. Co., Torrington, Conn.
Day, A. G., 16 Dey st., N. Y.
Eastern Electric Cable Co., 61 Hampshire st., Boston, Mass.
Edison Machine Co., Schenectady, N. Y.
Electrical Supply Co., 175 Lake st., Chicago, Ill.
Greeley, E. S., & Co., 5 & 7 Dey st., N. Y.
Holmes, Booth & Haydens, 25 Park pl., N. Y.; Waterbury, Conn.
Hotchkiss, Clark B., 16 Dey st., N. Y.
India Rubber & Gutta Percha Insulating Co., 159 Front st., N. Y.
Kelly, James F., 19 Dey st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Moore, Alfred F., 202-204 W. 3d st., Phila., Pa.
New England Wiring & Construction Co., 13 Central st., Boston, Mass.
N. Y. Insulated Wire Co., 64 B'way, N. Y.; 13 Central st., Boston, Mass.
Okonite Co. (The), 13 Park Row, N. Y. **11.**
Pittsburgh Electric Co., 213 Wood st., Pittsb'gh, Pa.
Plume & Atwood Mfg. Co. (The), Waterbury, Conn.
Roebling, John A., Sons Co., 117 Liberty st., N. Y. **8.**
Russell, A. L., 109-115 Court st., Boston, Mass.
Scoville Mfg. Co., Waterbury Conn.
Simplex Electric Co., 328 Wash'n st., Boston, Mass.; 145 B'way, N. Y.
Standard Electrical Works, Pearl, c. Elm st., Cincinnati, O.
Standard Underground Cable Co., 708 Penn av., Pittsb'gh, Pa.; 139 E. Madison st., Chicago, Ill.; 18 Cortlandt st., N. Y.
Tatham & Bros., 226 S. 5th st., Phila., Pa.
Washburn & Moen Mfg. Co., Worcester Mass. 16 Cliff st., N. Y.; 107 Lake st., Chicago, Ill.
Western Electric Co., Chicago, Ill.

Wire—Electric Light.

American Electrical Works, Providence, R. I.; 18 Cortlandt st., N. Y.
Ansonia Brass and Copper Co., 19 Cliff st., N. Y.; 64 Washington st., Chicago, Ill.; Ansonia, Conn.
Benson & Thompson, 3015 Chestnut st., Phila., Pa.
Bishop, W. S., 95 Grand av., New Haven, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Brush Electric Co., Cleveland, O.
Bunnell, J. H. & Co., 100 Liberty st., N. Y.
Callender Insulating and Waterproofing Co., 45 Broadway, N. Y.
Campbell Electrical Supply Co., 95 Milk st., Boston, Mass.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Detroit Electrical Works, Detroit, Mich.
Edison Machine Works, Schenectady, N. Y.
Edison Wiring Co., 65 5th av., N. Y.
Electrical Supply Co., 171 Randolph st., Chicago, Ill.; Ansonia, Conn.
Greeley, E. S. & Co., 5 Dey st., N. Y.
Holmes, Booth & Haydens, 25 Park pl., N. Y.
Hotchkiss, Clark B., 16 Dey st., N. Y.
Jackson & Morgan, 16 Exchange pl., N. Y.
Jones, C. E. & Bro., 55 Longworth st., Cincinnati, O. **78.**
Kelly, James F., 19 Dey st., N. Y.
Moore, Alfred F., 200 N. 3d st., Phila., Pa.
N. Y. Insulated Wire Co., 452 Broadway, N. Y.; 11 Central st., Boston, Mass.
Novelty Electric Co., 5th and Locust sts., Phila., Pa.
Okonite Co. (The), 13 Park Row, N. Y. **11.**
Roebling's, John A., Sons Co., 117 Liberty st., N. Y. **8.**
Simplex Electrical Co., 328 Washington st., Boston, Mass., 145 Broadway, N. Y.
Standard Underground Cable Co., 91 5th av., Pittsburgh, Pa.; 16 Cortlandt st., N. Y.
Tatham & Bros., 226 S. 5th st., Phila., Pa.

Wire Fence, Guards and Railings.

Acme Steam Wire and Iron Railing Works, 80-90 Pearl st., B'klyn, N. Y.
Alldridge, A. W., 69 Cortlandt st., N. Y.
Ansonia Brass & Copper Co., 19 Cliff st., N. Y.
Brooklyn Wire Cloth Works, 107 John st., N. Y.
Chicago Wire Works, 169 E. Madison st., Chicago, Ill.
Cholson Fencing Co., 160 W. 3d st., Cincinnati, O.
Clinton Wire Cloth Co., Clinton, Mass.
Darby, Edward & Sons, 231-233 Arch st., Phila., Pa.
Estey, W. S., 71 Fulton st., N. Y.
Fulton Wire Works, 63 Fulton st., N. Y.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Hollow Cable Mfg. Co., Hornellsville, N. Y.
Hopkins & Co., N. Y. Steam Wire Works, 90 W. B'way, N. Y.
Howard & Morse, 45 Fulton st., N. Y.
Iowa Barb Wire Co., 98 Reade st., N. Y.
Mecke, H., 888 8th av., N. Y.
Needles, Joseph A., 54 N. Front st., Phila., Pa.
Roebling's, John A., Sons & Co. (The), 117-119 Liberty st., N. Y. **8.**

The numbers following names indicate page on which the firm advertises.

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Toledo Wire and Iron Works, 242 Summit st., Toledo, O.
Voss, F., 67-69 W. Monroe st., Chicago, Ill.
Washburn & Moen Mfg. Co., Worcester, Mass.
West Broadway Wire Works, 122 W. B'way, N. Y.

Wire—Galvanized.

Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.
Iowa Barb Wire Co., Easton, Pa.
Prentiss, George W. & Co., Holyoke, Mass.
Washburn & Moen Mfg. Co., Worcester, Mass.

Wire—German Silver.

Ansonia Brass and Copper Co., 19-21 Cliff st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Cheshire Brass Co., W. Cheshire Conn.
Merchant & Co., 9 Burling sl., N. Y.; 317 Arch st., Phila., Pa.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Waterbury Brass Co., Waterbury, Conn.

Wire Goods.

Howard & Morse, 45 Fulton st., N. Y.
Leadley & Co., 762 Woodbridge st., Detroit, Mich.
Ludlow-Saylor Wire Co., 116 S. 4th st., Phila., Pa.
Palmer Wire Mfg. Co., Palmer, Mass.
Pennsylvania Wire Works, 231 Arch st., Phila., Pa.
Prentiss, Geo. W. & Co., Holyoke, Mass.
Rome Brass and Copper Mills, Rome, N. Y.
Tyler, W. S. Wire Works Co., Cleveland, O.
Voss, Frederick, 67 W. Monroe st., Chicago, Ill.
Wickwire Bros., Cortland, N. Y.

Wire—Insulated.

American Electrical Works, 67 Stewart st., Providence, R. I.; 18 Cortlandt st., N. Y.
Ansonia Brass & Copper Co., 19 Cliff st., N. Y.; 64 Wash'n st., Chicago, Ill.
Benedict & Burnham Mfg. Co., Waterbury, Conn; 24 Oliver st, Boston, Mass.
Benson & Thompson, 3015 Chestnut st., Phila., Pa.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Bunnell, J. H., & Co., 106 Liberty st., N. Y.
Bridgeport Brass Co., 19 Murray st., N. Y.; Bridgeport, Conn.
Bridgeport Electric Mfg. Co., Bridgeport, Conn.
Callender Insulating & Waterproofing Co., 45 B'way, N. Y.; Chicago; Boston.
Campbell Electric Supply Co., 52 Fulton st., N. Y.
Clark Insulated Electric Wire Co., 419 Walnut st., Phila., Pa.
Day, A. G., 16 Dey st., N. Y.
Detroit Electrical Works, Detroit, Mich.
Eastern Electric Cable Co., 61 Hampshire st., Boston, Mass.
Edison Machine Works, Schenectady, N. Y.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.; Ansonia, Conn.
Greeley, E. S., & Co., 5 & 7 Dey st., N. Y.
Habirshaux, Wm. M., 159 Front st., N. Y.
Holmes, Booth & Haydens, 25 Park pl., N. Y.
Hotchkiss, Clark B., 16 Dey st., N. Y.
India Rubber & Gutta Percha Insulating Co., 159 Front st., N. Y.
Kelly, James F., 19 Dey st., N. Y.
Meyer, Curt W., 357 4th av., N. Y.
Moore, Alfred F., 200 N. 3d st, Phila., Pa.
Mowbray, Geo. M., North Adams, Mass.
New York Insulated Wire Co., 452 B'way, N. Y.; 11 Central st., Boston Mass.
Okonite Co. (The), 13 Park Row, N. Y. **11.**
Roebling's, John A., Sons Co., 117 Liberty st., N. Y. **8.**
Russell, Albert L., 109 Court st., Boston, Mass.
Simplex Electrical Co., 328 Wash'n st., Boston, Mass.; 145 B'way, N. Y.
Smith, J. J. C., Passaic, N. J.
Standard Underground Cable Co., 708 Penn av., Pittsb'gh, Pa.; 18 Cortlandt st., N. Y.
Tatham & Bros., 226 S. 5th st., Phila., Pa.
Triplex Insulated Wire and Rubber Co., 159 Front st., N. Y.
Western Electric Co., 227-251 S. Clinton st., Chicago, Ill.

Wire—Iron and Steel.

Albany Wire Works, Albany, N. Y.
American Wire Co. (The), Lake, c. Marquette st., Cleveland, O.
Ansonia Brass and Copper Co., 19 Cliff st., N. Y.
Brand Mfg. Co. (The), New Britain, Conn.
Carey & Moen, 225-239 W. 28th st., N. Y.
Cleveland Rolling Mill Co., Cleveland, O.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Crabb, Wm. & Co., Bloomfield av. and Morris Canal, Newark, N. J.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Hartman Steel Co., 48 5th av., Pittsburgh, Pa.
Hobson & Son, Francis, 97 John st., N. Y.
Leicester Wire Co., Leicester, Mass.
Miller & Van Winkle, 102 Walker st., N. Y.
Montgomery & Co., 105 Fulton st., N. Y.
Morrison Wire Rope Co., Williamsport, Pa.
Nail Co., H. P., Cleveland, O.
New Haven Wire Co. (The), 26-28 Crown st., New Haven, Conn.
Prentiss, Geo. W. & Co., Holyoke, Mass.
Roebling's, John A., Sons Co., 117-119 Liberty st., N. Y. **8.**
Spencer Wire Co., Spencer, Mass.
Trenton Iron Co., Trenton, N. J.
Washburn & Moen Mfg. Co., Worcester, Mass.

Wire Rope—Iron and Steel Hoisting Rope and Fastenings.

Lidgerwood Mfg. Co., 96 Liberty st., N. Y. **111.**
Claffy, John, 49 Dey st., N. Y. **91.**

Wire—Lead Covered.

Eaton, A. K., 65 Henry st., B'klyn, N. Y.
N. Y. Insulated Wire Co., 64 B'way, N. Y.

Wire Manufacturers.

Albany Wire Works, Albany, N. Y.
Allen J. B., 231 Vine st., Phila., Pa.
Allis, T. V. Mfg. Co., Trenton, N. J.
American Barb Wire Co., 310 S. 21st st., St. Louis, Mo.
Amer. Electrical Works, 67 Stewart st., Providence, R. I.
Am. Fencing Co., 234 W. 29th st., N. Y.
American Screw Co., Providence, R. I.
American Wire Co., 21 N. 5th st., Phila., Pa.; Lake, c. Marquette st., Cleveland, O.
Ansonia Brass & Copper Co., 19-21 Cliff st., N. Y.; Ansonia, Conn.
Ashley Wire Co., Joliet, Ill.
Ashworth, T., Bristol, Conn.
Baer, Geo., 187 Washington st., Buffalo, N. Y.
Baker Wire Co., Des Moines, Ia.
Barbee, W. T., Lafayette, Ind.
Bassett, Robert N., Birmingham, Conn.
Bateman, D. C., 29 Bank st., Phila., Pa.
Bateman Mfg. Co., 1425 Carpenter st., Phila., Pa.
Bayley, Wm. & Co., 81-87 Chicago st., Milwaukee, Wis.
Belknap, W. B. & Co., 115-121 N. Main st., Louisville, Ky.
Belmer, H. & Co., 47 W. Pearl st., Cincinnati, O.
Benedict & Burnham Mfg. Co., 24 Oliver st., Boston, Mass.; Waterbury, Conn.; 17 N. 7th st., Phila., Pa.; 13 Murray st., N. Y.
Bertsch, M., Cleveland, O.
Besher, John H., 18 New Church st., N. Y.
Binghamton Wire Works, Binghamton, N. Y.
Bishop Gutta Percha Co., 422 E. 25th st., N. Y.
Blancard & Co., 36-38 John st., N. Y.

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Blun, F. S. M. & Co , 18 Walker st., N. Y.
Boerner, W. R., 1162 Milwaukee av., Chicago, Ill.
Bond, Oliver, Milwaukee, Wis.
Broomhead, G., Paterson, N. J.
Booth, John, 166 Lake st., Chicago, Ill.
Boughan, J. H., 24 Cliff st., N. Y.
Boylan, A., Belleville, N. J.
Braddock Wire Co., Braddock, Pa.; Pittsburgh, Pa.
Bridgeport Brass Co., 2 Willard st., Bridgeport, Conn.; 19 Murray st., N. Y.
Brockner & Evans, 28 Vesey st., N. Y.
Brooklyn Wire Nail Co., 17 B'way, N. Y.
Broomhead, Geo., ft. West st., Newark, N. J.
Brower, Walter S., 12 Plain st., Albany, N. Y.
Brown Bros., Covington, Ky.
Bryant, J. H. & Co., 61 Michigan st., Chicago, Ill.
Cable, Wm., Excelsior Wire Mfg. Co., 43 Fulton st., N. Y.
California Wire Works, 329 Market st., San Francisco, Cal.
Callender Insulating and Waterproofing Co., 43 Broadway, N. Y.; 154 La Salle st., Chicago, Ill.
Cambria Iron Co., 218 S. 4th st., Phila., Pa. **2.**
Canton Wire Works, Canton, Md.
Carey & Moen, 234 W. 29th st., N. Y.
Cheever, Chas. A., 13 Park Row, N. Y.
Cherryvale Barb Wire Co., Cherryvale, Kan.
Cheshire Brass Co., West Cheshire, Conn.
Chicago Wire and Iron Works, 110 Lake st., Chicago, Ill.
Cincinnati Barbed Wire Fence Co., Fairmount C. H. & D. R. R., Cincinnati, O.; 97 Chambers st., N. Y.
Clark, Everett, E., Hanson, Mass.
Clark, M. F. & Co., Medfield, Mass.
Cleveland Rolling Mill Co., Nat. Bank Bldg., Cincinnati, O.; 91 E. Lake st., Chicago, Ill.
Clinton Wire Cloth Co., Clinton, Mass.
Coe Brass Mfg. Co., Stonington, Conn.
Colville & Stewart, 108 E. Lake st., Chicago, Ill.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Cortlandt Wire Mfg. Co., 67 Centre st., N. Y.
Crandal Mfg. Co. (The), 74 Michigan st., Chicago, Ill.
Darby, Edw. & Son, 231 Arch st., Phila., Pa.
Day, Austin G., 16 Dey st., N. Y.
De Con & Co., 4th and Roberts sts., St. Paul, Minn
Detroit Copper and Brass Rolling Mills, c. 4th and Larned sts., Detroit, Mich.
De Witt Wire Cloth Co., 703 Market st., Phila., Pa., 11 Murray st., N. Y.
Dickerson, Clarence, 23 Astor House, N. Y.
Dockter, J., Hiattsville, Kan.
Dow Wire Works Co., 726 W. Market st., Louisville, Ky.
Eagle Wire and Iron Works, Nicollet Island, Minneapolis, Minn.
Eastern Wire Works, Harrison, Me.
Eastwood Wire Mfg. Co., Belleville, N. J.
Electrical Supply Co. (The), Ansonia, Conn.
Estey, W. S., 86 Fulton st., N. Y.
Excelsior Wire Co., Burlington, Ia.
Fay, Francis A., 134 Leonard st., B'klyn, N. Y.
Frankworth, W. & Co., 376 3d st., Milwaukee, Wis.
Fraser, Russell, 242 Centre st., N. Y.
Freeman Wire Co., 400 N. Main st., St. Louis, Mo.
Fuller, Geo. H. & Son, Pawtucket, R. I.
Gates, J. W & Co., St. Louis, Mo.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Gilbert & Bennett Mfg. Co. (The), 228 E. Lake st., Chicago, Ill.; Georgetown, Conn.
Glen Wire Mfg. Co. (The), Cuyahoga Falls, O.
Globe Rolling Mill Co., 163 W. Pearl st., Cincinnati, O.
Grant Wire and Spring Co., 218 Lake st., Chicago, Ill.; Lockport, Ill.
Gregory, F. H., 1548 N. 13th st., Phila., Pa.
Griswold Bros., ft. Ida Hill st., Troy, N. Y.
Hale, B. S. & Son, Malden, Mass.
Haley Mfg. Co., 103 Chauncey st., Boston, Mass. Concord, N. H.
Hamilton, Thos., 1340 Vienna st., Phila., Pa.
Harrison Wire Co., 816 S. 23d st., St. Louis, Mo.
Hartford Wire Works, Hartford, Conn.
Hartley, George, 13 E. Main st., Waterbury, Conn.
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.; 107 Dearborn st., Chicago, Ill.; Pittsb'gh Pa.
Hayden, P., & Sons, Columbus, O.
Hayes Mfg. Co., Cleveland, O.
Hazard Mfg. Co., Wilkesbarre, Pa ; 87 Liberty st., N. Y.: 218 Lake st., Chicago, Ill.
Hendrickson & Bartel, 93 Cliff st., N. Y.
Henneck, C., & Co., 79 Buffalo st., Milwaukee, Wis.
Herzog Mfg. Co., Minneapolis, Minn.
Hohlweck, Geo., 14 2d av., N. Y.
Holdsworth & Co., 581 Grand st., B'klyn, N. Y.
Holmes, Booth & Haydens, 25 Park pl., N. Y.; 185 Dearborn st., Chicago, Ill.; 506 Commerce st., Phila., Pa.
Hopkins & Co., 90 W. B'way, N. Y
Hotchkiss, Clark B., 16 Dey st., N. Y.
Howard & Morse, 45 Fulton st., N. Y.
H. P. Nail Co., Cleveland, O.
Illinois Wire Co., East St. Louis, Mo.
India Rubber & Gutta Percha Insulating Co. (The), 159 Front st., N. Y.
Iowa Barb Wire Co., 98 Reade st., N. Y.
Jessop Bros, Pittburgh, Pa.
Kansas City Wire & Iron Works, 14 E. 8th st., Kansas City, Mo.
Kilmer Mfg. Co., 543 S. State st., Chicago, Ill.
Kraft, Gross & Co., Joliet, Ill.
Laclede Wire & Fence Co., 225 Chestnut st., St. Louis, Mo.
Lambert & Bishop Wire Fence Co., Joliet, Ill.
Lamb, Horace, & Co., Northampton, Mass.
Lehigh & Franklin Wire Mills (Stewart & Co.), Easton, Pa.
Leicester Wire Co., Leicester, Mass.
Logan, Gregg & Co., 306 Wood st., Pittsburgh, Pa.
Lone Star Wire Co., 903 N. Main st., St. Louis, Mo.
Long Island Wire & Iron Works, 349 Adams st., B'klyn, N. Y.
Louisiana Wire & Iron Works, New Orleans, La.
Louisville Wire & Iron Works., Louisville, Ky.
Lowell Steel Wire Co., Lowell, Mass.
Ludlow-Saylor Wire Co. (The), 116 S. 4th st., St. Louis, Mo.
McCosh Iron & Steel Co., Burlington, Ia.
McCoy & Linn, Milesburg, Pa.
Mershon & Bancroft, 218 Lake st., Chicago, Ill.
Miller, R. D., 71 Chicago av., Chicago, Ill.
Miller & Van Winkle, 102 Walker st., N. Y.
Milesburg Iron Works (McCoy & Linn), Milesburg, Pa.
Misker, J. H., & Co., Evansville, Ind.
Montgomery & Co., 105 Fulton st., N. Y.
Moore, A. F., 200 N. 3d st., Phila., Pa.
Morgan Star Barbed Wire Co., Pittsb'gh, Pa,
Mowbray, G. M., North Adams, Mass.
Murphy, Wm., 1128 Market st., Phila., Pa.
National Iron Fence Co., 22 Cortlandt st., N. Y.
National Mfg. Co., 24 Cliff st., N. Y.
National Wire and Iron Co., 137 E. Lake st., Chicago, Ill.; Detroit, Mich.
Needles, J. A , 54 N. Front st , Phila., Pa.
Newhall, H. B. Co., 105 Chambers st., N. Y.
New Haven Wire Co. (The), 26 Crown st., New Haven, Conn.; 116 Lake st., Chicago, Ill.; 32 Fulton st., N. Y.
N. Y. Insulated Wire Co., 452 B'way, N. Y.; 18 Central Wharf, Boston, Mass.
N. Y. Wire and Wire Spring Co., 171 B'way, N. Y.
Niebuhr, C. A., 393 Division st., Chicago, Ill.
Ohio Steel Barb Fence Co., 16 Platt st., N. Y.
Okonite Co. (The), 13 Park Row, N. Y. **11.**
Oliver & Roberts Wire Co., S. 3d and Bingham sts., Pittsburgh, Pa.
Osborne & Cheesman Co. (The), 39 Barclay st., N. Y.; Ansonia, Conn.

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Otis Iron and Steel Co., 138 E. Jackson st., Chicago, Ill.
Palmer Wire Mfg. Co., Palmer, Mass.
Perkins Mfg. Co. (The), New Haven, Conn.
Phelps Dodge & Co., Cliff st., N. Y.
Philadelphia Wire Works, 1340 Vienna st., Phila., Pa.
Phillips, E. B. & Co., 374 Broad st, Pawtucket, R. I.
Phospor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Pizzalo, P., 923 Montgomery st., San Francisco, Cal.
Plume & Atwood Mfg. Co. (The), 18 Murray st., N. Y.; 115 Lake st., Chicago, Ill.; 71 Pearl st., Boston, Mass.; Waterbury, Conn.
Powell, F. & Co., 238 Summit st., Toledo, O.
Prentiss, Geo. W. & Co., Holyoke, Mass.
Prince & Co., 234 Broadway, N. Y.
Prouty, Geo. C., Charlton City, Mass.
Rainear, Thos. R., 35 S. 23d st., Phila., Pa.
Rattey, Emile, 46 W. 30th st., N. Y.
Reeve & Chester, Cuyahoga Falls, O.; 312 Dearborn st., Chicago, Ill.
Richardson, F. G., 107 John st., N. Y.
Ried & Keller, 120 W. 25th st., N. R.
Roebling's, John A., Sons, Co., 117 Liberty st., N. Y.; Trenton, N. J.; Chicago, Ill.; San Francisco, Cal. **8.**
Rome Iron Works, Rome, N. Y.
St. Louis Wire Co., Papin, c. 21st st., St. Louis, Mo.
St. Louis Wire Fence Co., 814 N. 2d st., St. Louis, Mo.
St. Louis Wire Mill Co., St. Louis, Mo.
St. Paul Wire Works, 332 Robert st., St. Paul, Minn.
Salem Wire Nail Co., Salem, O.
Sanderson Bros. Steel Co., Syracuse, N. Y.
Sanford Bros., Buffalo, N. Y.
Saportas, Arnold C., 52 B'way, N. Y.
Scovill Mfg. Co., 3 Broome st., N. Y.; Waterbury, Conn.
Schieler & Sons, 145 Main st., Buffalo, N. Y.
Sedgwick Bros., Richmond, Ind.
Self-Retaining Hair Pin Co., 106 7th av., N. Y.
Shaw, W. A. & Co., 19 Portland st., Boston, Mass.
Southern Barbed Wire Co., 805 N. 2d st., St. Louis, Mo.
Southern Wire Works, Chattanooga, Tenn.
Spafford, John & Co., Rockford Ill.
Spangenberg, Theo., 198 Madison st., Chicago, Ill.
Spencer Wire Co., Spencer, Mass.
Splitdorf Wire Co., 14 Reade st., N. Y.
Sprigel, M. & Co., 105 Broad st., N. Y.
Standard Underground Wire Cable Co., 128 Pearl st., N. Y.; Penn Bldg., Pittsburgh, Pa.
Stanlar & Laffey, 53 Fulton st., N. Y.
Stanley Corrugated Fire Proof Lathing Co., 120 B'way, N. Y.
Stewart & Co., South Easton, Pa.
Stultz, Louis, 118 Market st., St. Louis, Mo.
Sugden, R., Spencer, Mass.
Symonds, John L., Detroit, Mich.
Tate & Co., Malden, Mass.
Tatham & Brothers, 226-228 S. 5th st., Phila., Pa.
Thompson Iron & Wire Works, Detroit, Mich.
Thorn Wire Hedge Co., 21 Clinton st., Chicago, Ill.
Tolman, P. & Co., Harrison, Me.
Townsend, W. P. & Co., Pittsburgh, Pa.; New Brighton, Pa.
Trenton Iron Co., Trenton, N. J.; 17 Burling sl., N. Y.; 21 N. 4th st., Phila., Pa.
Union Foundry Co., New Haven, Conn.
Union Steel Co., Chicago, Ill.
Union Wire Works, St. Louis, Mo.
U. S. Wire Nail Co., 84 Shelby st., Indianapolis, Ind.
Wallace & Sons, 89 Chambers st., N. Y.
Wampum Co-operative Wire Co., Wampum, Pa.
Washburn & Moen Mfg. Co., Worcester, Mass.; 16 Cliff st., N. Y.; 107 E. Lake st., Chicago, Ill.
Waterbury Brass Co., Waterbury, Conn.
Western Union Wire Co., Papin, c. 21st st., St. Louis, Mo.
Wickwire Bros., Cortland, N. Y.
Williams, Geo. A., 85 Fulton st., N. Y.
Wire Goods Co. (The), Worcester, Mass.
Whitten & Lascell, 13 State st., Lynn, Mass.
Wolff, R. H. & Co. (Ltd.), R. R. av., Bridgeport, Conn.; ft. E. 118th st., N. Y.
Woodman, R., 169 High st., Boston, Mass.
Woods, Sherwood & Co., 176 Fulton st., N. Y.
Wooley & Co., 63 Fulton st., N. Y.
Worcester Wire Co., Worcester, Mass.

Wire—Merchant.

Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Hartman Steel Co. (Ltd.), Beaver Falls, Pa.

Wire—Mill.

Oliver & Roberts Wire Co. (Ltd.), Pittsb'gh, Pa.
Union Steel Co., 302 1st Nat'l Bank Bldg., Chicago, Ill.

Wire—Platinum.

Meyes, Curt W., 357 4th av., N. Y.
White, S. S., Dental Mfg. Co. (The), Chestnut, c. 12th st., Philadelphia, Pa.

Wire—Rivet Manufacturers.

Leicester Wire Co., Leicester, Mass.
Washburn & Moen Mfg. Co., Worcester, Mass.

Wire Rope.

Baker, Howard H. & Co., 18 to 26 Terrace, Buffalo, N. Y.
Baker, J. & Co., 79 Commercial st., Boston, Mass.
Broderick & Bascom Wire Rope Co, St. Louis, Mo.
Brown & King, 62 S. Broad st., Atlanta, Ga.
Bullivant & Co., 72 Mark Lane, London, E. C., England.
Cable Railway Co., 329 Market st., San Francisco, Cal.
California Wire Works, San Francisco, Cal.
Cannon, H., Co., 24-26 Market st., Chicago, Ill.
Carpenter, Geo. B. & Co., 208 S. Water, Chicago, Ill. **31.**
Childs, H. L. & Co., 8 Smithfield st., Pittsburgh, Pa.
Claffey, John, 48 Dey st., N. Y. **91.**
Cooper, Hewitt & Co, 17 Burling sl., N. Y.
Copeland, Chas. W., 24 Park pl., N. Y.
Copeland & Bacon, 85 Liberty st., N. Y.
Conyngham, Thos. D., 87 Liberty st., N. Y.
Dana, R. K., 16 Cliff st., N. Y.
De Grauw, Aymer & Co., 34 & 35 South st., N. Y.
Fraser & Chalmers, Fulton & Union sts., Chicago, Ill.
Hazard Mfg. Co., Wilkesbarre, Pa.; 5 6th st., Pittsburg, Pa.; 87 Liberty st., N. Y.
Houghton, J. H., 66 Canal st., Boston, Mass.
Hunt & Co., C. W., 111 B'way, N. Y.
Hyndman, N. P. & Co., 6th av., Pittsburgh, Pa.
Kay, Bros. & Co., 121 Water st., Pittsburgh, Pa.
Knoxville Car Wheel Co., Knoxville, Tenn.
Leschen, A. & Sons' Rope Co, 905 N. Main st., St. Louis, Mo.
Logan, James H., Penn Bldg., Pittsburgh, Pa. **53.**
Ludlow-Saylor Wire Co. (The), 116 S. 4th st., St. Louis, Mo.
Mason, John W. & Co., 52 Dey st., N. Y.
Mershon & Bancroft, 218 Lake st., Chicago, Ill.
Miller Bros. & Fletcher, 119 2d st., S., Minneapolis, Minn.
Morrison Wire Rope Co., Williamsport, Pa.
Norris, G. D. & Co, Milwaukee, Wis.
Perkins Machinery Co., Atlanta, Ga.
Philip & Wiggs Machinery Co., Birmingham, Ala.
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Post & Co., Pearl, c. Elm st., Cincinnati, O.

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Roebling's Sons Co. (John A.), Trenton, N. J.; 217 Lake st., Chicago, Ill.; 14 Drumm st., San Francisco, Cal.; 117 Liberty st., N. Y. **S.**
Trenton Iron Co., Trenton, N. J.; 17 Burling sl., N. Y.
Upson, Walton & Co., 131 River st., Cleveland, O.
Washburn & Moen Mfg. Co., 107-109 Lake st., Chicago, Ill.; 16 Cliff st., N. Y.; Worcester, Mass.
Whittier Machine Co., 1176 Tremont st., Boston, Mass.
Williams, G. A., 85 Fulton st., N. Y.
Williams & Orton Mfg. Co., Sterling, Ill.

Wire Screens.

Eagle Wire & Iron Works, Nicollet Island, Minneapolis, Minn.

Wire for Screws.

Milesburg Iron Works (McCoy & Linn), Milesburg, Pa.

Wire—Telegraph, Telephone.

Ansonia Brass & Copper Co., Ansonia, Conn.; 19 Cliff st., N. Y.
American Electrical Works, 67 Stewart st., Providence, R. I.; 18 Cortlandt st., N. Y.
Benedict & Burnham Mfg. Co., Waterbury, Conn.
Benson & Thompson, 3015 Chestnut st., Phila., Pa.
Bishop Gutta-Percha Co., 420-426 E. 25th st., N. Y.
Bunnell, J. H. & Co., 106 Liberty st., N. Y.
Campbell Electrical Supply Co., 95 Milk st., Boston, Mass.
Central Electric Co., 38 La Salle st., Chicago, Ill.
Clark Insulated Electric Wire Co., 419 Walnut st., Phila., Pa.
Cooper, Hewitt & Co., 17 Burling sl., N. Y.
Detroit Electrical Works, Detroit, Mich.
Eastern Electric Cable Co., 61 and 63 Hampshire st., Boston, Mass.
Edison Machine Works, Schenectady, N. Y.
Electrical Supply Co., 17 Dey st., N. Y.; 171 Randolph st., Chicago, Ill.
Gautier Steel Dept. of Cambria Iron Co., Johnstown, Pa. **2.**
Greeley, E. S. & Co., 5-7 Dey st., N. Y.
Hazard Mfg. Co., Wilkesbarre, Pa.
Holmes, Booth & Haydens, 25 Park pl., N. Y.
Jaques & Eustis, Cambridgeport, Mass.
Kelly, James F., 19 Dey st., N. Y.
Moore, Alfred F., 200 N. 3d st., Phila., Pa.
New Haven Wire Co., New Haven, Conn.
Novelty Electric Co., 5th & Locust sts., Phila., Pa.
Okonite Co. (The), 13 Park Row, N. Y. **11.**
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Plume & Atwood Mfg. Co., Waterbury, Conn.
Roebling & Sons, John A., 119 Liberty st., N. Y.; Trenton, N. J. **S.**
Russell, Albert L., 109 Court st., Boston, Mass.
Standard Underground Cable Co., 91 5th av., Pittsburgh, Pa.; 16 Cortlandt st., N. Y.
Tate & Co., Malden, Mass.
Trenton Iron Co., Trenton, N. J.
Washburn & Moen Mfg. Co., 16 Cliff st., N. Y.; 107 Lake st., Chicago, Ill.; Worcester, Mass.
Western Electric Co., Trinity pl., N. Y.

Wire—Woven.

Needles, Jos. A., 54 N. Front st., Phila., Pa.

Wire Cloth—Brass and Copper.

Albany Wire Works, Albany, N. Y.
Cabble, Wm., Excelsior Wire Mfg. Co., 43 Fulton st., N. Y.
Darby, Edward & Son, 231-233 Arch st., Phila., Pa.
Eastwood Wire Mfg. Co., Belleville, N. J.
Estey, W. Shepard, 71 Fulton st., N. Y.
Forest City Wire & Iron Works, 111 Franklin av., Cleveland, O.
Gilbert & Bennett Mfg. Co., 228 Lake st., Chicago, Ill.
Howard & Morse, 45 Fulton st., N. Y.
Needles, Joseph A., 54 N. Front st., Phila., Pa.
Wright Wire Cloth Co., 52 Fulton st., N. Y.

Wire Cloth—Iron, Steel and Galvanized.

Acme Steam Wire & Iron Railing Works, 80-90 Pearl st., B'klyn, N. Y.
Albany Wire Works, Albany, N. Y.
Anderson, H. C., & Co., 124 W. B'way, N. Y.
Barbed Wire & Works, 100 Lake st., Chicago., Ill.
Barnum, E. T., Detroit, Mich.
Bataille, Achille, 122 W. B'way, N. Y.
Bigelow-Cheney Wire Works, 32 Taylor st., Springfield, Mass.
Binster Steam Wire & Iron Works (The), 106 & 108 Water st., Toledo, O.
Bolles, J. E., & Co., Woodbridge, bet. 7th & 8th sts., Detroit, Mich.
Bromwell Brush & Wire Goods Co. (The), 181 Walnut st., Cincinnati, O.
Brooklyn Wire Cloth Works, 403 Hewes st., B'klyn, N. Y.
Brooklyn Wire Works, 107 John st., N. Y.
Buchannan, Bolt & Co., Holyoke, Mass.
Cabble, W., Excelsior Mfg. Co., 82 Ainslie st., B'klyn, N. Y.; 43 Fulton st., N. Y.
Callender Insulating Waterproofing Co., Kingsland av., E. N., Newark, N. J.
Cheney-Bigelow Wire Works, 34 Taylor st., Springfield, Mass.
Clinton Wire Cloth Co., 76 Beekman st., N. Y.; 137 Lake st., Chicago, Ill.; 23 Court st., Boston, Mass.; Clinton, Mass.
Cortland Wire Works, 9 Dey st., N. Y.
Darby, Edward Sons, 231-233 Arch st., Phila., Pa.
DeWitt, J. H., & Son, 1209 De Kalb av., B'klyn, N. Y.
DeWitt Wire Cloth Co., 11 Murray st., N. Y.; 703 Market st., Phila., Pa.
DeWolf, W. & Son, Whitewater, Wis.
Eastwood Wire Mfg. Co., Belleville, N. J.
Estey, W., Shepard, 71 Fulton st., N. Y.
Evans & Co., 136 Lake st., Chicago, Ill.
Forest City Wire & Iron Works, 111 Franklin av., Cleveland, O.
Fraser & Chalmers, Fulton & Union sts., Chicago, Ill.
Fulton Wire Works, 63 Fulton st., N. Y.
Gilbert & Bennett Mfg. Co., 228 Lake st., Chicago, Ill.; 42 Cliff st., N. Y.; Georgetown, Conn.
Hollenbeck & Miller, 47 S. Illinois st., Indianapolis, Ind.
Hopkins & Co. (N. Y. Steam Wire Works), 90 W. Broadway, N. Y.
Howard, Geo. E., 76 Beekman st., N. Y.
Howard & Morse, 1197 DeKalb av., B'klyn, N. Y.; 45 Fulton st., N. Y.
Jeliff, C. O. & Co., Southport, Conn.
Jennings, C. A., Wilton, Conn.
Klingshammer, C. E., 316 Market st., Newark, N. J.
Klossen, Merrill, Cleveland, O.
Knapp & Hague, 52 Fulton st., N. Y.
Lockwood Bros., Wilton, Conn.
Lowell Wire Cloth Mf'y, Lowell, Mass.
Ludlow-Saylor Wire Co., 116 S. 4th st., St. Louis, Mo.
McMurray, Robert, 9 Dey st., N. Y.
Meyers, Fred. J., Mfg. Co. (The), 419-423 Madison av., Covington, Ky.
Michigan Wire and Iron Works, Howard st., c. Wabush av., Detroit, Mich.
National Wire and Iron Co., Dayton, O.; Congress, c. 4th st., Detroit, Mich.
Needles, Jos. A., 54 N. Front st., Phila., Pa.
Newark Wire Works, 146 Market st., Newark, N. J.
New Jersey Wire Cloth Co., 117-119 Liberty st., N. Y.; Clinton st., Trenton, N. J.
Nosack, George, r. 339 E. 11th st., N. Y.
Palmer, I. E., Middletown, Conn.

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Pangburn & Stafford, 84 Chestnut st., Albany, N. Y.
Perot, E. L., 1026 Ridge av., Phila., Pa.
Phosphor-Bronze Smelting Co. (The), 512 Arch st., Phila., Pa.
Rice & Co., Lowell, Mass.
Richardson, F. G., 107 John st., N. Y.; 69 12th st., B'klyn, E. D., N. Y.
Roebling's, John A., Sons Co., 117 Liberty st., N. Y.; Trenton, N. J. **8.**
Schoeffel, John & Bros., 104 Meserole st., B'klyn, E. D., N. Y.
Smith, F. P., Wire & Iron Works, 96 Lake st., Chicago, Ill.
Snow, John, 76-78 Rxchange st., Rochester, N Y.
Staniar & Laffey, 53 Fulton st., N. Y.; Passaic av., E. N., Newark, N. J.
Toledo Wire & Iron Works, 242 Summit st., Toledo, O.
Tristam Bros., 195 Water st, N. Y.
Tyler, W. S., Wire Works Co., 754-758 St. Clair st., Cleveland, O.
Van Allen, A., Jr., 24 Beaver st., Albany, N. Y.
Voss, Frederick, 67-69 W. Monroe st., Chicago, Ill.
Wickwire Bros., Cortland, N. Y.
Williams, George A., 85 Fulton st., N. Y.
Wire Cloth Co., Trenton, N. J.
White, S. E., 151 State st., Rochester, N. Y.
Wooley & Co., 63 Fulton st., N. Y.
Wright Wire Cloth Co., 52 Fulton st., N. Y.

Wood—Carpeting.

Cincinnati Wood Carpet Co., 200 W. 4th st., Cincinnati, O.

Wood and Iron Working Machinery and Wood Split Pulleys.

Taylor, Wm. H., 22 Cortlandt st., N. Y. **79.**

Wood Fillers.

Chicago Wood Finishing Co., 143-145 S. Clinton st., Chicago, Ill.
Breinig, G. M., New Milford, Conn.; 96 Maiden la., N. Y.
Bridgeport Wood Finishing Co. (The), New Milford, Conn.
Mepham, M. S. & Bro., 1301 Papin st., St. Louis, Mo.
Peninsular White Lead & Color Works, Detroit, Mich.

Wood Finishers—Transparent.

Murphy & Co., 227 B'way, N. Y. **84.**

Wood—Perforated.

Frost & Peterson, 163 W. 18th st., N. Y.
Gardner, Holmes & Co., 183 Canal st., N. Y.

Wood Stains.

Bowe, J. C., 36 E. Genessee st., Syracuse, N. Y.

Wood Polish and Hard Finish.

Butcher Polish Co., 11 Haverhill st., Boston, Mass.
Cabot, Samuel, 70 Kilby st., Boston, Mass. **64.**
Chicago Wood Finishing Co., 143-145 S. Clinton st., Chicago, Ill.
Handy Package Dye Co., Adams Centre, N. Y.
Liszka, G. G., 213-219 Varnet st., B'klyn, N. Y.
Lindeman, William T. & Co., 1400-1402 Frankford av., Phila., Pa.
Rosenberg, D. & Sons, 207 Av. D, N. Y.
Senour Mfg. Co., 72-74 Ewing st., Chicago, Ill.
Stain Filler Co. (The), Decatur, Ill.
Walpole Dye and Chemical Works, 44 Oliver st., Boston, Mass.
Woodhouse, Samuel F., Frankford, Pa. **70.**
Zinsser, Williams & Co., 197 William st., N. Y.

Wood Stain, Preserving.

Cabot, Samuel, 70 Kilby st., Boston, Mass. **64.**
Chicago Tie Preserving Co., 15th and Clarke sts., Chicago, Ill.

Wreckers and Divers.

Baker, J., Norfolk, Va.
Baker Salvage Co., Norfolk, Va.
Baltimore Wrecking Co., 1749 Thames st., Balt., Md.
Baxter, John F., 308 West st., N. Y.
Blanchard Navigation Co., Columbus st., c. Woodbridge av., Detroit, Mich.
Bundick, John S., 75 South st., N. Y.
Chapman Derrick & Wrecking Co., 70 South st., N. Y.
Cohen, J. & Son, 321 Pearl st., N. Y.
Detroit Tug and Transit Co., ft. 1st st., Detroit, Mich.
Grummond, S. B., Office and Dock, bet. 1st and Cass sts., Detroit, Mich.
International Wrecking Co., ft. 1st st., Detroit, Mich.
Kirtland, Wolf & Davidson, Wilwaukee, Wis.
Lowe, Edw. R., 2 Coenties sl., N. Y
Manion, P. P. (Blacksmith and Wrecking Co.), 800 N. Levee st., St. Louis, Mo.
Merritt's Wrecking Organization, 49 Wall st., N. Y.
Moffat Tug and Canada Wrecking Co., 52 Griswold st., Detroit, Mich.
New England Wrecking Co., Lewes, Del.
New Orleans Wrecking and Salvage Co., New Orleans, La.
Pridgeon Wrecking Co., 15 Atwater st., Detroit, Mich.
St. Louis Underwriters' Wrecking Co., 319 N. 2d st., St. Louis, Mo.
St. Louis Wrecking Co., Chestnut, c. 16th st., St. Louis, Mo.
Scott, T. A., New London, Conn.
Windsor Tug and Wrecking Co., ft. 1st st., Detroit, Mich.
Wolter, Herman, 106 S. Delaware av., Phila., Pa.

Wrenches—Manufacturers.

American Saw Co., Trenton, N. J.
Armstrong Mfg. Co. (The), Bridgeport, Conn. **33.**
Augusta Wrench Co., Augusta, Me.
Belden, R. A., Co (The), Danbury, Conn.
Bemis & Call Hardware and Tool Co., 14 Taylor st., Springfield, Mass.
Billings & Spencer Co. (The), Hartford, Conn.
Boston Wrench Co., 32 Charlestown st., Boston, Mass.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Cincinnati Tool Co. (The), Cincinnati, O.
Clark, Geo. L., 48 Hanover st., Boston, Mass.
Cleveland Screw Wrench Co., Cleveland, O.
Coes, A. G. & Co., Worcester, Mass.
Coes, L. & Co., Worcester, Mass.
Collins & Co., 212 Water st., N. Y.
Cook, R. F., Ilion, N. Y.
Cortland Wrench Co., Homer, N. Y.
Diamond Wrench Co. (The), Portland, Me.
Ellrich Hardware Mfg. Co. (The), Plantsville, Conn.
Girard Wrench Mfg. Co., Girard, Pa.
Jewell Mfg. Co., Toledo, O.
Lowell Wrench Co., Worcester, Mass.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Marble, Geo. W., 32 S. Canal st., Chicago, Ill.
Porter Mfg. Co., 597 Washington st., Boston, Mass.
Portsmouth Wrench Co., Portsmouth, N. H.
Pratt & Whitney Co. (The), Hartford, Conn.
Reed, A. O., Higganum, Conn.
Rouse, R. R., Indianapolis, Ind.
St. Nicholas Toy Co., 784-794 W. Madison st., Chicago, Ill.
Smith & Egge Mfg. Co. (The), Bridgeport, Conn.
Sterling Wrench Co., Sterling, O.

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Utility Wrench Co., 231 E. 9th st., N. Y.
Walker Wrench Co., 154 E. Lake st., Chicago, Ill.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Warner, G. F. Mfg. Co. (The), 212-228 East st., New Haven, Conn.
Williams, J. H. & Co., 9-15 Richards st., B'klyn, N. Y.

Wrenches—Pipe.

Armstrong Mfg. Co. (The), Bridgeport, Conn. **23.**
Avery Elevator Bucket Co., Leonard and Winter sts., Cleveland, O.
Barnes Tool Co., 958 Grand av., New Haven, Conn.
Belden, R. A. & Co. (The), Danbury, Conn.
Billings & Spencer Co. (The), Hartford, Conn.
Case, A. Wells, South Manchester, Conn.
Duncan, W. P. & Co., Bellefonte, Pa.
Hoggson & Pettis Mfg. Co. (The), 64-68 Court st., New Haven, Conn.
Huntington & Patton, 116 Superior st., Cleveland, O.
Machinists' Supply Co., 216 Lake st., Chicago, Ill.
Maynard & Marsh, 12 Cortlandt st., N. Y.
Post & Co., 154 Lake st., Chicago, Ill.
Rouse, R. R., Indianapolis, Ind.
Walworth Mfg. Co., 16 Oliver st., Boston, Mass.
Williams, J. H. & Co., 9-15 Richards st., B'klyn, N. Y.

Wrenches—R. R. Car.

American Saw Co., Trenton, N. J.
Chester Steel Castings Co., 407 Library st., Phila., Pa. **46.**
Dwight, E. P., 407 Library st., Phila., Pa.
Walker Wrench Co., Sing Sing, N. Y.

Wrenches—Screw.

Cleveland Screw Wrench Co., 650 Scranton st., Cleveland, O.
Coes, A. G. & Co., Worcester, Mass.
Coes, L. & Co., Worcester, Mass.
Peck, Stow & Wilcox Co., Southington, Conn.

Yacht Builders.

Baldwin, G. H., Branford, Conn.
Bockee, John J., 47 Dey st., N. Y.
Boston Yacht Agency, 43 Milk st., Boston, Mass.
Bramhall, E. H., Camden, Me.
Clark & Co., G. F., 43 Milk st., Boston, Mass.
Higgins & Gifford, Gloucester, Mass.
New England Ship Building Co., Bath, Me.
Osborn, Wm. R., Peekskill, N. Y.
Pryor, W. K. & Co., 43 Milk st., Boston, Mass.
Tebo, W. M., ft. 23d st., B'klyn, N. Y.

Zinc Manufacturers.

Acme White Lead and Color Works, Detroit, Mich.
Alburtis, Clement W., 33-35 Liberty st., N. Y.
Bertha Zinc Co., Pulaski Station, Va.
Bergen Point Zinc Works, Van Buskirk, N. J.
Bertha Zinc Co., Martin's Station, Va.
Bakewell & Mullins, Salem, O.
Bridgewater Iron Co., Bridgewater, Mass.
Briggs, John & Co., 31 Batterymarch st., Boston, Mass.
Boston Lead Mfg. Co., 162 Congress st., Boston, Mass.
Buttzville Zinc Co., Buttzville, N. J.
Childs, Chas. M. & Co., 225 Pearl st., N. Y.
Chilton Mfg. Co., 48 Maiden lane, N. Y.
Clermont Lead and Zinc Co. (Ltd.), 203 Walnut pl., Phila., Pa.
Coe Brass Mfg. Co., Torrington, Conn.
Connecticut Electrical Co., 101 Bank st., Waterbury, Conn.
Conner & Brewster, Joplin, Mo.
Devoe, F. W. & Co., 101 Fulton st., N. Y.
Eagle Zinc Works, Hatmaker, n. Price Hill Incline Plane, Cincinnati, O.
Edes, Mixter & Heald Zinc Co., Knoxville, Tenn.
Edgar, S. C., c. Blow and Water sts., St. Louis, Mo.
Foster, W. T., & Co., 178 Commercial st., Boston, Mass.
Girard White Lead, Zinc and Color Works (Ltd.), 123 Arch st., Phila., Pa.
Glendale Zinc Works, Blow, c. Water st., St. Louis, Mo.
Granby Mining and Smelting Co., St. Louis, Mo.
Holder & Herrick, 123 Milk st., Boston, Mass.
Howell, C. H., & Co., 212 Race st., Phila., Pa.
Illinois Zinc Co., Peru, Ill.
Joplin Zinc Co., Joplin, Mo.
Lanyon, Robert, & Co., Pittsburgh, Kans.
Lanyon, S. H., & Bro., Pittsburgh, Kans.
Lanyon, W. & J., Pittsburgh, Kans.
Lucas, John, & Co., 89 Maiden la., N. Y.
Lawrence, W. W., & Co., Water st., n. Penn av., Pittsb'gh, Pa.
Lehigh Zinc & Iron Co. (The), 47 N. Front st., Phila., Pa.
Kremer Bros., 25 Jessie st., San Francisco, Cal.
Manning & Squier, 111 Liberty st., N. Y.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
Measures, Jos., 143 Portland st., Boston, Mass.
Mercer Zinc Co., Trenton, N. J.
Meyersieck, W., & Co., Hatmaker st., Cincinnati, O.
Mineral Point Zinc Co., Mineral Point, Wis.
N. J. Zinc & Iron Co., 52 Wall st., N. Y.
Osgood, F., & Co., 13 Peck sl., N. Y.; Franklin, Pa.
Passaic Zinc Co., Jersey City, N. J.; 111 Liberty st., N. Y.
Phelps, Dodge & Co., 11 Cliff st., N. Y.
Pitcher Zinc and Lead Co., Joplin, Mo.
Platt Bros. & Co. (The), Waterbury, Conn.
Raynolds, C. T. & Co., 106-108 Fulton st., N. Y.
St. Louis Lead and Oil Co., St. Louis, Mo.
Seelig, M. J. & Co., 115 Manjer st., B'klyn, N. Y.
Southwest Lead & Zinc Co., Joplin, Mo.
Sterling Lead & Zinc Co., 52 B'way, N. Y.
Stoll, J. A., 588 Grand st., B'klyn, N. Y.
Taunton Copper Mfg. Co., 11 Broad st., Boston, Mass.
Wetherill, S. P. Co. (Ltd.), 47 N. Front st., Phila., Pa.
West Joplin Lead and Zinc Co., Joplin, Mo.
Wood, Nathaniel, & Co., Plymouth, Mass.
Wythe Union Lead and Zinc Mine Co., Max Meadows, Va.

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Information on all subjects of interest to the trades incorporated in this Directory is respectfully solicited, especially in regard to new inventions, improvements and general Railway appliances.

RAILWAY DIRECTORY PUBLISHING Co.,

18 *Cortlandt Street, New York.*

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List of Railroad Officials throughout the United States and Canada having charge of the Purchasing and Rolling Stock Departments (including the Repair and Car Shops), with name of Railroads, location, number of miles operated, equipage, etc.

NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Adirondack	60	5	65	C.E. Durkee, Supt., Edward Legnard, M. M,, J. J. Traver, M. C. B., Saratoga, N. Y.
Addison & Northern Penn	51	6	60	F. M. Baker, Gen. Supt., M. J. McMahon, M. M., Addison, N. Y.
Albert	51	3	35	G. A. Robinson, Pur. Agt., Jas. McKay, M. M. & C. B., Hillsboro. N. B.
Alleghany Valley	259	72	2,418	David McCargo, Gen. Supt., H. D. Mason, Pur. Clk, C. B. Price, Supt. (Riv. Div.), Pittsburgh, Pa.; S. B. Rumsey, Supt. (L. G. Div.), Reynoldsville, Pa ; John C. Glass, M. M., Jno. Cowan, M. C. B., Verona, Pa.
Annapolis, Wash. & Balt.	20	5	11	John Wilson Brown, Pres. & Pass. Agt., John L. Beall, M. M., Baltimore, Md.
Annapolis & Balt. Short Line.	22	4	56	C. M. Leilich, Supt. & Pass. Agt., Jas. Chalk, M. M., Baltimore, Md.
Arizona & New Mexico	71	3	90	L. Russell, Gen. Supt. & Pass. Agt., R. T. Scott, M. M., James Crum, M. C. B., Clifton, Ark.
Arkansas Midland	50	3	75	A. H. Johnson, Pr. & Gen. Man., J. B. Johnson, Supt., J. L. Worthley, M. M. & M. C. B., Helena, Ark.
Ashland Coal & Iron	22	8	432	Douglas Putnam, Jr., Gen. Supt., Robt. Peebles, Pur. Agt., E. M. Roberts, M. M. & M. C. B., Ashland, Ky.
Atchison, Topeka & Santa Fe.	3,289	389	11,296	Jas F. Goddard, Gen. Man., A. C. Armstrong. Pur. Agt., Geo. Hackney, Supt. Mach., Topeka, Kas.
Eastern Div.				F. A. Burgess, Supt., John Hodge, M. C. B., Topeka, Kan.; John Fagan, M. M., Atchison, Kan.; R. H. Briggs, M. M., Argentine, Kan.; Alfred Taylor, M. M., Emporia, Kan.
Mid. Div.				H. R. Nickerson, Supt., Newton, Kan.; Henry Giegoldt, M. M., Raton, N. M.
W. Div.				C. M. Rathburn, Supt., A. C. Stiles, M. M., La. Junta, Col.
Las Vegas Div.				Chas. Dyer, Supt., Las Vegas, N. M.; W. L. Hoffecker, M. M., Raton, N. M.
Rio Grande Div.				E. Hockett, M. M., San Marcial, N. M.
So. Kan.	663	25	917	J. L. Barnes, Supt., Lawrence, Kan.; T. D. Volk, M. M., Ottawa, Kan.
Atlantic & North Carolina	95			S. L. Dill, Gen. Man., New Berne, N. C.
Atlantic & Pacific	815	49	456	Henry C. Nutt, Pres., Boston, Mass.; C. W. Smith, Gen. Man., Chicago, Ill.; A. A. Gaddis, Supt., G. A. Hancock, M. M., Albuquerque, N. M.; Geo. Hackney, Supt. Mach., Topeka, Kan.; A. A. Gaddis, Pur. Agt., Albuquerque, N. M.
Alb. Div.				Andrew Smith, Supt., Albuquerque, N. M.
Cal. Div.				A. M. Beal, Supt., The Needles, Ar.
Arz. Div.				A. Smith, Supt., Winslow, Ar.
Austin & Northwestern	60	5	75	A. N. Leitnaker, G. Supt. & Pas. Agt., P. L. Walker, M. M. & M. C. B., Austin, Tex.
Baltimore & Ohio	1,809	756	25,877	
East of Ohio River				Wm. M. Clements, Man., Baltimore, Md.; W. W. Peabody, Man., Newark, O.; N. S. Hill, Pur. Agt., A. J. Cromwell, Supt. M. P., S. B. Crawford, M. M., E. W. Grieves, M. C. B., Baltimore, Md
Main Line Div.				Thos. Fitzgerald, Div. Supt., Baltimore, Md.; J. F. Legge, Div. Supt., Grafton, W. Va.; Thos. C. Prince, Div. Supt., Winchester, Va.; F. R. Proudfoot, Gen. For., Cam. Sta. Balto.; G. W. Humphreys, Gen. For., Washington, D. C.; W. B. McClung, Gen. For., Sandy Hook, Md.; J. M. Marstellan, M. M., Martinsburg, W. Va.; H. M. Wineow, Gen. For., Cumberland, Md.; J. E. Gleason, M. M , Piedmont, W. Va.; John Adair, M. M., Grafton, W. Va.; Alex. Laird, M. M., Wheeling, W. Va.; P. Hayden, Gen. For., Parkersburg, W. Va.
Pittsburgh Div.				J. V. Patton, Supt., Pittsburgh, Pa.; I. N. Kalbaugh, M. M., Thos. Lindsay, Gen. For., Glenwood, Pa.

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Baltimore & Ohio.				
Philadelphia Div.				J. Van Smith, Supt., Thos. Tresize, M. M., Philadelphia, Pa.
West of Ohio River				W. W. Peabody, Man., Chicago., Ill.; W. H. Harrison, Supt. M. P., Newark, O.
Ohio Div.				R. T. Devries, Supt., Newark, O.
Chicago Div.				F. H. Britton, Supt., So. Chicago, Ill.; E. L. Weisgerber, M. M. Ohio Div., Newark, O.; B. F. Lowther, M. M. Chic. Div., Garrett, Ind.; A. Laird, M. M., Bellaire, O.; W. F. Bentley, Gen. For., Zanesville, O.; E. C. Rigger. Gen. For., Newark, O.; M. H. Scoville, Gen. For., Columbus, O.; Thos. Taylor, M. M., Sandusky, O.; H. M. Ingler, M. M., Chicago Junction, O.; G. W. Mudd, Gen. For., Garrett, Ind.; C. H. Campbell, Gen. For., So. Chicago, Ill.
Bangor & Piscataquis	76	5	87	Arthur Brown, Supt. & Pur. Agt., C. S. Nason, M. M., Bangor, Me.; J. W. Comins, M. C. B., Oldtown, Me.
Bangor & Portland	34	5	50	C. Miller, Pres. & Gen. Man., Bangor, Pa.; J. S. Hough, M. M., Nazareth, Pa.; D. Vankirk, M. C. B., Bangor, Pa.
Barclay	16	4	3	R. T. Dodson, Supt., Barclay, Pa.; E. B. Sheffer, Pur. Agt., 21 Cortlandt St., N. Y.
Batesville & Brinkley	60	4	54	R. W. Martin, Pres., W. J. Thompson, Gen. Man., Little Rock, Ark.; John T. Flynn, Gen. Supt., C. H. Newell, M. M., L. F. Hill, M. C. B., Brinkley, Ark.
Bath & Hammondsport	10	2	23	H. S. Stebbins, Gen. Man., M. H. Hall, Supt., Hammondsport. N. Y.
Beach Creek	125	26	1,343	A. G. Palmer, Supt. & P. A., La Mott Ames, M. M., A. L. Dravenstadt, M. C. B., Jersey Shore, Pa.
Bellaire, Zanesville & Cin	112	7	206	I. H. Burgoon, Rec. & Gen. Man., J. W. Gregg, M. M. & M. C. B., Zanesville, O.
Bell's Gap and Clearf'd & Jeff.	62	6	525	R. G. Ford, Supt. & Pur. Agt, Geo. Van Brunt, M. M., A. Zimmerman, M. C. B., Bellwood, Pa.
Belt, and Chic. & Western Ind.	27	28	130	Jas. D. Carson, Gen. Man., C. C. Nash, Pur. Agt., Peter H. Peck, M. M., Chicago, Ill.
Bennington & Rutland	59	10	245	E. D. Bennett, Supt. & Pur. Agt., Bennington, Vt.; Chas. J. McMaster, M. M. & C. B., Rutland, Vt.
Birming., Selma & N. O.	21	2	10	A. W. Jones, Pres., A. M. Fowlks, Supt., Selma, Ala.
Bodie & Benton R. & Com. Co.	37	4	60	Thomas Holt, Supt. & Pur. Agt., E. L. Reese, M. M. & M. C. B, Bodie, Cal.
Boston, Hoosac Tunnel & W'n	87	26	1,038	A. T. Smith, Pur. Agt., New York, N. Y.; John Medway, M. M., John S. Ellis, M. C. B., Mechaniesville, N. Y.
Boston, Revere Beach & Lynn	9	9	59	C. A. Hammond, Supt. & P. Agt., R. D. Sutherland, M. M., John Coghlan, M. C. B., Boston, Mass.
Boston & Albany	388	252	6,703	W. H. Barnes, Gen. Man., Boston, Mass.; H. T. Gallup, Gen. Supt., A. B Underhill, Supt. M. P., Springfield, Mass.; F. D. Adams, Gen. M. C. B., J. T. Chamberlain, For. C. Shop, Allston, Mass.; H. B. Chesley, Div. Supt., Wm. H. Taft, Div. M. M., Boston, Mass.; E. L. Sackett, Div. Supt., H. W. Eddy, Div. M. M., J. B. Weston, For. Car Shop, Springfield, Mass.; W. R. Robeson, Jr., Div. Supt., T. B. Purvis, Div. M. M., J. E. Doran, For. Car Shop, East Albany, N. Y.
Boston & Lowell	714	177	4,896	C. S. Mellen, Gen. Supt., Geo. E. Shepard, Pur. Agt., Wm. Smith, Supt. M. P. & M., Boston, Mass.
(Leased to Boston & Maine.)				
So. Div.				W. F. Simons, Supt., Boston, Mass.; H. S. Kolseth, M. M., East Cambridge, Mass.
Wh. Mt. Div.				W. A. Stowell, Supt., Woodsville, N. H.; Geo. A. Ferguson, M. M., Lake Village, N. H.
Vt. Div.				W. A. Stowell, Supt., Woodville, N. H.; George A. Ferguson, M. M., St. Johnsbury, Vt.
Passumpsic Div.				H. E. Folsom, Supt., Lyndonville, Vt.
Boston & Maine	583	240	5,597	Geo. C. Lord, Pres., Jas. T. Furber, Gen. Man., G. Fred. Hurd, Pur Agt., Wm. Smith, Supt., M. P. & M., Boston, Mass.; D. Richardson, M. C. B., Lawrence, Mass.: A. M. Waitt, Asst, M. C. B., Salem, Mass.
West. Div.				Wm. Merritt, Jr., Supt., Boston, Mass.
East. Div.				D. W. Sanborn, Supt., Boston, Mass.
North. Div				J. W. Sanborn, Supt., Wolfboro Junction, N. H.
Wor., Nash & Port. Div.				Geo. W. Hurlburt, Supt., Amos Barrett, M. M., Worcester, Mass.
Boston & Providence	67	62	1,194	A. A. Folsom, Gen. Supt. & P. A., Boston, Mass.; Geo. Richards, M. M., Jno. Lightner, M. C. B., Roxbury, Mass.

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Bridgton & Saco River.....	16	2	19	Wm. F. Perry, Pres., J. A. Bennett, Supt., M. M. Caswell, Pur. Agt. & M. M., Bridgton, Me.
Brighthope.....	32	4	169	Jas. R. Werth, Supt., Geo. M. Wilson, Pur. Agt., Richmond, Va.; A. Gary, M. M. & M. C. B., Chester, Va.
Brooklyn, Bath & West End..	7	8	57	J. M. Butler, Pres., Philadelphia, Pa.; Aug. Wolff, M. M. & M. C. B., Brooklyn, N.Y.
Brooklyn & Brighton Beach..	8	8	54	J. L. Morrow, Supt. & P. A., Wm. Finley, M. M., Brown Settle, M. C. B., Flatbush, N.Y.
Brunswick & Western.....	171	10	105	H. S. Haines, Gen. Man., Geo. W. Haines, Supt., D. B. Overton, M. M. & M. C. B., Brunswick, Ga.
Buffalo, Rochester & Pittsb'g	260	74	5,296	Geo. E. Merchant, Gen. Man., Rochester, N.Y.; G. W. Bartlett, Gen. Supt., Buffalo, N.Y.; Alonzo Dolbeer, Supt. M. P. & M., Geo. C. Payne, M. C. B., Rochester, N.Y.
Burlington, Ced. Rapids & N..	1,039	104	4,206	C. J. Ives, Pres. & Gen. Supt., Robt. Williams, Supt., Cedar Rapids, Ia.; G. A. Goodell, Asst. Supt., Estherville Ia.; W. P. Brady, Asst. Supt., T. Stickney, Pur. Agt., R. W. Bushnell, M. M. & C. B., Cedar Rapids, Ia.
Burlington & Lamoille.....	34	4	87	G. L. Linsley, Gen. Man., F. G. Brownell, M. M. & C. B., Burlington, Vt.
Buslington & North-West'n..	123	7	214	
Burlington & Western.....	105	3	125	John T. Gerry, Supt., Adam Metz, M. M., Burlington, Ia.
Cairo, Vincennes & Chicago Line.....	247	291	1,448	M. A. McDonald, Gen. Man., Cairo, Ill.; John A. Quinn, M. M., Mt. Carmel, Ill.
California Southern.....	210	17	148	D. McCool, Supt., W. J. Tench, Pur. Agt., San Bernardino, Cal.; Geo. Hackney, Supt. Mach., Topeka, Kan.; C. Daniel, M. M. & C. B., San Bernardino, Cal.
Canada Atlantic.....	135	191	2,500	E. J. Chamberlain, Gen. Man., M. Donaldson, M. M. & C. B., Ottawa, Ont.
Canadian Pacific.....	1,742	118	2,726	W. C. Van Horne, V. Pres., Francis R. F. Brown, Mech. Supt., T. G. Shaughnessy, Asst. G. M., A. C. Henry, Pur. Agt., Montreal, Can.
E. Div				C. W. Spencer, A. G. Supt, Montreal, Can.
W. Div.....				Wm. White. Gen. Supt., Winnipeg, Man.
A. & O. Div.....				T. S. McKinnon, Gen. Supt., Montreal, Can.
Pac. Div.....				H. Abbott, Gen. Supt., Vancouver, B. C.
Cape Fr. & Yadkin V.....	220	12	168	J. W Fry, Gen. Supt. & P. A., Greensboro, N. C.; I. W. Clark, M. M., M. W. Johnson, M. C. B., Fayetteville, N. C.
Cape Girardeau Southwest'n	67	6	125	Louis Houck, Gen. Man., W. A. Penny, Supt., T. F. Wheeler, Pur. Agt., Fred, Glover, M. M., Cape Girardeau, Mo.
Carolina Central				R. W. Shepard, Jr., Manager, Montreal, Can.; A. Boileau, M. M., Carillon, Que.
Carson & Colorado.....	293	8	237	H. M. Yerington, P. & G. S., Carson City, Nev.; R. J. Laws, Asst. G. Supt., Hawthorne, Nev.; Hume Yerington, Pur. Agt., I. N. Fording, M. M., M. M. Hyde, M. C. B., Carson City, Nev.
Carthage & Adirondack.....	45	3	65	C. B. Benson, Gen. Man. & P. A., E. A. Bond, Supt., Carthage, N. Y.
Catasauqua & Fogelsville....	27	6	612	C. W. Chapman, Supt. & P. A., Catasauqua, Pa.; John Thomas, M. M., Hokendauqua, Pa.
Catskill Mountain.....	19	3	26	Charles A Beach, Supt., Jno. L. Driscoll, M. M. & M. C. B., Catskill, N. Y.
Central of Georgia.....	1,115	148	2,099	E. P. Alexander, Pres., M. S. Belknap, Gen. Man., W. H. Price, Pur. Agt., Chas. Blackwell, Eng. of Mach., Savannah, Ga.
Main Stem.....				Levi Hege, Supt., D. D. Arden, M. M., Savannah, Ga.; T. F. Warwick, M. M., Augusta, Ga.
So.-Western Div.....				F. D. Kline, Supt., D. M. Gugel, M. M., S. A. Charplot, M. C. B., Macon, Ga.
So. Car Div.....				W. W. Starr, Supt., T. F. Warwick, M. M., Augusta, Ga.
Col. & Western Div.....				W. H. McClintock, Supt., J. E. Albrecht, M. M., Columbus, Ga.
Central of N. J. Operating Cumb. & Maurice River and Lehigh & Lackawanna roads.....	1,023	363	32,520	J. H. Olhausen, Gen. Supt., Elizabeth, N. J.; A. Reckless, Pur. Agt., New York, N.Y.; G. H. Griggs, Supt. M. P., Elizabethport, N. J.; L. C. Brastow, Supt., M. P., Ashley, Pa.
Central Amer. & Pacific and Central of Guatemala.....	72	10	163	C. P. Huntington, Pres., New York, N. Y.; G. Nanne, Gen. Man., W. D. Soules, Gen. Supt., Guatemala City, Guat.
Central Iowa.....	504	57	2,344	E. L. Dudley, Rec. & G M., J. G. Johnston, Asst. Supt., C. H. Ackert, Pur. Agt., M. C. Wheeler, M. M., E. E. Carver, M. C. B., Marshalltown, Ia.
Central Ontario.....	104	10	157	E. W. Dench, Supt., James Falconar, M. M., Trenton, Ont.

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Central Pacific (Operated by So. Pacific Co.)	4,303	382	11,260	A. N. Towne, Gen. Man., J. A. Fillmore, Gen. Supt., R. H. Pratt, A. G. Supt., San Francisco, Cal.; A. J. Stevens, Gen. M. M.; Benj. Welch, Gen. M. C. B., Sacramento, Cal.
Western Div.				A. D. Wilder, Supt., N. Bechdell, M. M. (W. Div.), W. B. Ludlow, M. C. B. (W. Div.), Wm. McKenzie, M. M., W. Oakland, Cal.
Visalia Div				G. W. Coddington, Supt., S. Johnson, M. M., Tulare, Cal.
Sacramento Div.				J. B. Wright, Supt., Sacramento, Cal.; M. W. Cooley, M. M., Rocklin, Cal.
Truckee Div.				J. H. Whited, Supt., Geo. H. Hunt, M. M., Wadsworth, Nev.
Salt Lake Div.				A. G. Fell, Supt., Ogden, Utah; P. Sheedy, M. M., Carlin, Nev.
Stockton & Copperopolis Div.				W. W. Prugh, S., M. J. Crosby, M. M., Stockton, Cal.
Los Angeles, and Yuma Divs.				E. E. Hewitt, Supt., Geo. Gregg, M. M., Los Angeles, Cal.
Gila & Tucson Div.				J. S. Noble, Supt., John Bonner, M. M., Tucson, Ariz.
Central Vermont	701	182	4,314	J. W. Hobart, Gen. Man., J. M. Foss, Gen. Supt., W. J. Robertson, Supt. M. P., H. Canham, M. C. B., St. Albans, Vt.
No. Div.				I. B. Futvoye, Supt., St. Johns, P. Q.
Rut. Div.				J. Burdett, Supt., N. L. Davis, M. M. & C. B., Rutland, Vt.
Brattleboro & Whitehall and Brat. Div.				E. F. Brooks, Supt., Brattleboro, Vt.
New London No'n.	141	22	303	C. F. Spaulding, Supt. & P. A., I. W. Dow, M. M., W. A. Beckwith, M. C. B., New London, Ct.
Og. & L. Cham. Div.				F. W. Baldwin, Supt., Ogdensburg, N. Y.; W. A. Short, M. M. & C. B., Malone, N. Y.
Chagrin Falls & Southern	5	2	12	W. Hutchings, Gen. Man., A. C. Williams, Gen. Supt., W. D. Sellers, M. M., Wm. Harver, M. C. B., Chagrin Falls, O.
Charleston & Savannah	120	20	200	S. C. Gadsden, Supt., Charleston, S. C.; H. A. Ulmo, M. M., Savannah, Ga.
Chateaugay	73	10	450	A. L. Inman, Gen. Man. & P. A., M. L. French, Supt., Plattsburg, N. Y.; J. M. Davies, M. M., Lyon Mountain, N. Y.
Chatham	11	2	3	J. B. Snowball, Man., A. Alcorn, M. M., Chatham, N. B.
Chattaroi	50	4	146	J. H. Northrup, Gen. Man. & P. A., H. M. Missimer, M. M., Joseph P. Burleigh, M. C. B., Ashland, Ky.
Chesapeake & Nashville	35	2	48	Robert Meek, Supt., John Rodley, Pur. Agt., Gallatin, Tenn.
Cheshire	80	30	522	R. Stewart, Gen. Man., H. H. Stone, Pur. Agt., F. A. Perry, M. M., A. E. Howard, M. C. B., Keene, N. H.
Chicago, Burlington & North.	855	56	1,702	Geo. B. Harris, Gen. Man., St. Paul, Minn.; J. M. Barr, Supt., La Crosse, Minn.; Geo. Hargreaves, Pur. Agt., St. Paul, Minn.; H. S. Bryan, M. M., La Crosse, Wis.; J. R. Hastings, Assist. Supt., Minneapolis, Minn.
Chicago, Burl'gton & Quincy. C. B. & Q., East Mo. River	2,079	465	19,448	H. B. Stone, Gen. Man., J. D. Besier. Gen. Supt., Wm. Irving, Gen. Pur. Agt., Chicago, Ill.; G. W. Rhodes, Supt. M. P. & C. B., Aurora, Ill.
Ill. Div				F. C. Rice, Supt., Galesburg, Ill.
Chic. Div.				Geo. Alexander, Supt., A. Forsyth, M. M., Aurora
Galesburg Div.				F. C. Rice, Supt., Robert Colville, M. M., Galesburg, Ill.
St. Louis Div.				L. E. Johnson, Supt., P. Wallis, M. M., Beardstown, Ill.
Ia. and Mo. Divs				W. C. Brown, Supt., Burlington, Ill.
East. Div.				O. E. Stewart, Asst. Supt., Joel West, M. M., Burlington, Ia.
Mid. Div.				J. B. Maxom, Asst. Supt., Ottumwa, Ia.
Western Div.				J. H. Duggan, Asst. Supt., C. W. Eckerson, M. M., Creston, Ia.
Chic. Bur. & Kan. C'y and St. Louis, Keok. & No. Western				C. M. Levey, Asst. Supt., W. H. Bartlett, M. M., Keokuk, Ia.
Burlington & Mo. in Neb.	1,936	156	4,824	G. W. Holdredge, Gen. Man., Omaha, Neb.; Wm. Irving, Pur. Agt., Chicago, Ill.; T. E. Calvert, Gen. Supt., D. E. Thompson, Asst. Supt., Lincoln, Neb.; D. Hawksworth, M. M., Plattsmouth, Neb.

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Chic., Fairchild & Eau Claire.	16	4	40	N. C. Foster, Gen. Man., Fairchild, Wis.; C. I. Wickersham, Pur. Agt., Chicago, Ill.; M. Burkhart, M.M., T. W. Brown, M. C. B., Fairchild, Wis.
Chic., Iowa & Dakota	27	2	15	John Porter, Gen. Man., Eldora, Ia.
Chic., Milwaukee & St. Paul.	5,646	732	22,838	Frank S. Bond, V. Pres., New York, N. Y.; Roswell Miller, Gen. Man., Jos. F. Tucker, Assist. Gen. M., J. T. Clark, Gen. Supt., A. J. Earling, Asst. Gen. Supt., J. T. Crocker, Pur. Agt., Geo. Gibbs, Mech. Eng., E. Fairbairn, M. M., J. N. Barr, Supt. M. P. & C. D., W. E. Kittridge, Asst. Supt. C. D., Milwaukee, Wis.
Chic. Div.				S. J. Collins, Supt, Chicago, Ill.
Evanston Div.				S. J. Collins, Supt., Chicago, Ill.
C. & C. B. Div. in Ill.				S. J. Collins, Supt., Chicago, Ill.
C. & C. B. Div. in Ia.				R. B. Campbell, Supt., Marion, Ia.
C. Rap. & Ottum Line.				R. B. Campbell, Supt., Marion, Ia.
Kan. City Div.				H. R. Williams, Supt., Kansas City, Mo.
La Crosse Div.				W. G. Collins, Supt., Milwaukee, Wis.
Wis. Valley Div.				W. G. Collins, Supt., Milwaukee, Wis.
P. du Chien Div.				E. W. McKenna, Supt., Milwaukee, Wis.
Minn. Point Div.				E. W. McKenna, Supt., Milwaukee, Wis.
Northern Div.				F. S. Atkin, Supt., Milwaukee, Wis.
Ia. & Dakota Div.				J. B. Moll, Supt., Mason City, Ia.
So. Minn. Div.				H. R. Williams, Supt., La Crosse, Wis.
So. City & Dak. Div.				L. B. Beardsley, Supt., Sioux City, Ia.; C. W. Case, Asst. Gen. Supt., Minneapolis, Minn.
River Div.				W. J. Underwood, Supt., La Crosse, Wis.
Dubuque Div.				W. J. Underwood, Supt., La Crosse, Wis.; S. Charnley, M.M., P. Renier, M. C. B., Dubuque, Ia.
Ia. & Minn. Div.				E. H. Graves, Supt., Minneapolis.
Hast. & Dak. Div.				W. M. Kellie, Supt., Minneapolis.
James River Div.				C. A. Goodnow, Supt., Aberdeen, Dak.
Chip. Valley Div.				J. H. Lakey, Supt., Wabasha, Minn.
Wabasha Div.				J. H. Lakey, Supt., Wabasha, Minn.; D. A. Olin, Asst. Gen. Supt., Racine, Wis.
Racine & So. W. Div.				C. A. Cosgrave, Supt., Oxford Junction, Ia.; John Taylor, M. M., Racine, Wis.
Chicago, Rock Island & Pac.	1,384	336	8,367	R. R. Cable, Pres., E. St. John, Gen. Man., H. F. Royce, Gen. Supt., F. A. Marsh, Pur. Agt., T. B. Twombly, Gen. M. M., G. L. Chatfield, Asst. G. M. M., B. K. Verbryck, Gen. M. C. B., Chicago, Ill.
Ill. Div.	..			R. H. Chamberlin, Supt., Sam l Pullman, M. C. B., Chicago, Ill.
Ia. Divs.				Jno. Given, Supt., Des Moines, Ia.; J. G. Crockett, M. M., Stuart, Ia.; Jas. E. Morrill, M. M., Chas. M. Leonard, M. C. B., Davenport, Ia.
Des M. Val. Div.				C. N. Gilmore, Supt., Jno. C. Coombs, Asst. Supt., Des Moines, Ia.; S. W. Wakefield, M. M., Henry Kummer, M. C. B., Keokuk, Ia.
So. West'n Div.				Chas. R. Best, M. C. B., Trenton, Mo.
Chi. Kan. & Neb.				H. A. Parker, Gen. Man., Topeka, Kan.; W. I. Allen, Supt., Horton, Kan.; J. B. Twombly, Gen. M.M., Chicago, Ill.; James H. Kirk, M.M., Horton, Kan.; B. K Verbryck, Gen M.C.B., Chicago, Ill.
Chicago, Santa Fe & Cal. (Leased to A. T. & S. F.)	296	60	4,000	W. B. Strong, Pres., Boston, Mass.; C. W. Smith, 1st V. P. & G. M., D. J. Chase, Gen. Supt., Chicago, Ill.; A. H. Crocker, Supt., Streator, Ill.; Geo. Hackney, Supt. Mach., Topeka, Kan.; M. J. Rogers, M. M., Streator, Ill.
Chicago, St. Louis & Pittsb'gh	583	190	3,662	James McCrea, Gen. Man., Pittsburgh, Pa.; John F. Miller, Gen. Supt., Columbus, O.; Wm. Mullins, Gen. Pur. Agt., Pittsburgh, Pa.; Edward B. Wall, Supt. M. P., Columbus, O.
1, 3 and 5 Divs.				C. M. Bennett, Supt., Richmond, Ind.; Wm. Swanston, M. M., Edw. Austin, G. For. C. S., Indianapolis, Ind.
2 and 4 Divs.				Chas. Watts, Supt., W. C. Arp, M. M., Chas. H. Starr, G. F. C. Shops, Logansport, Ind.
Chi. St. P., Minn. & Omaha.	1,399	235	8,931	Marvin Hughitt, Pres., E. W. Winter, Gen. Man., Chicago, Ill.; W. A. Scott, Gen. Supt., W. H. S. Wright, Pur. Agt., Matt Ellis, M. M., J. J. Ellis, Asst. M. M., St. Paul, Minn.; H. C. Anderson, Asst. M. M., Sioux City, Ia.; H. L. Preston, M. C. B., Hudson, Wis.
Ea. & No. Div.				Jas. McCabe, Supt., St. Paul, Minn.
St. Paul & Sioux City Div.				H. Spencer, Supt., Mankato, Minn.
Neb. Div.				H. S. Jaynes, Supt., Omaha, Neb.
Chicago, St. Paul & Kan. City.	800	64	2,800	R. Du Puy, 2d V. Pres., J. M. Egan, Gen Man., T. W. Heintzelman, M. M., Wm. Patterson, M. C. B., St. Paul, Minn.
St. Paul Div.				Joel May, Supt., St. Paul, Minn.

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Chicago, St. Paul & Kan. City.				
Chic. Div				W. L. Hanson, Supt., Chicago, Ill.
D. M. Div				G. C. McMichael, Supt., Des Moines, Ia.
C., St. P. & K. City Div				M. C. Wheeler, M. M., Marshalltown, Ia.
Dubuque Div				Wilbert Irwin, Supt., Dubuque, Ia.
Chicago & Alton	849	228	7,166	C. H. Chappell, Gen. Man., Chicago, Ill.; T. M. Bates, Supt. of Trans., Bloomington, Ill.; A. V. Hartwell, Pur. Agt., Chicago, Ill.; Wm. Wilson, Supt. of Mach., Jos. Townsend, G. For. Car Dept., Bloomington, Ill.
Chic. Div				A. M. Richards, Supt., Bloomington, Ill.
St. L. & K. C. Div				D. Brock, Supt., Roodhouse, Ill.; Wm. Hill, M. M., Slater, Mo.
Chicago & Atlantic	269			B. Thomas, Gen. Supt., Chicago, Ill.; W. H. Selby, Supt M. P. & M., Huntington, Ind.
Chic. & East Ill., Chicago and Indiana Coal Ry	386	65	5,311	Geo. C. Kimball, V. Pres., D. R. Patterson, Gen. Man., Robt. Spencer, Pur. Agt., Chicago, Ill.; Allen Cooke, M. M. & M. C. B., Danville, Ill.
Chicago & Grand Trunk	335	128	2,226	W. J. Spicer, Gen. Man., A. B. Atwater, Supt.. J. S. Lorimer, Storekeeper, H. Roberts, Mech. Supt., Detroit, Mich.
Chicago & Iowa	104	20	212	H. D. Judson, Gen Supt., Rochelle, Ill.; Wm. Irving, Pur. Agt., Chicago, Ill.; B. W. Morris, M. M., Aurora, Ill.
Chicago & Northwestern	4,202	735	23,428	John M. Whitman, Gen. Man., Sherburn Sanborn, Gen. Supt., Jas. Wallace, Jr., Ass't Supt., R. W. Hamer, Pur. Agt., Geo. W. Tilton, Supt. M. P. & M., Wm. Smith, Asst. S. M. P. & M., C. A. Schroyer, Asst. S. C. D., Chicago, Ill.
Wis. Div				Ed. J. Cuyler, Supt., Chicago, Ill.
Gal. Div				Chas. Murray, Supt., Chicago, Ill.
Penn. Div				W. B. Linsley, Supt., J. Symons, M. M., Escanaba, Mich.
Mad. Div				G. A. Bidwell, Supt., H. D. Page, M. M., Baraboo, Wis.
W. & St. P. & Dak. Div				P. Hallenbeck, Asst. Gen. Supt., Wm. McIntosh, M. M., Winona, Minn.
Dak. Div				J. S. Oliver, Supt., Huron, Dak.
Ia. Div				M. Hopkins, Supt., Boone, Ia.; Robt. Quayle, M. M., Clinton, Ia.
No. Div				H. M. Hughes, Supt., Eagle Grove, Ia.
W. & St. P. Div				W. P. Cosgrave, Supt., Winona, Minn.
Chicago & Ohio River	86	3	8	C. E. Henderson, Gen. Man., Indianapolis, Ind.; W. A. Bell, M. M. & C. B., Kansas, Ill.
Chicago & West Michigan	413	48	2,505	J. B. Mulliken, V. P. & G. Man., Muskegon, Mich.; J. K. V. Agnew, Gen. Supt., Grand Rapids, Mich.; Allen Bourn, Pur. Agt., Detroit, Mich.; G. C. Watrous, S. M. P. & R. S., Muskegon, Mich.
Chicago & West'n Ind	58	20	150	James D. Carson, Gen. Man., P. H. Peck, M. M., C. C. Nash, Pur. Agt., Chicago, Ill.
Cin. Georget'n & Portsmouth	42	4	75	Ralph Peters, Pres., N. G. Roelker, V. P. & G. Man., Thos. Taggart, Supt., G. A. Roberts, M. M., W. J. Mathews, M. C. B., Cincinnati, O.
Cin. & Green River	17	2	50	G. B. Harper, Supt., Matthew Horton, M.M., Yosemite, Ky.
Cin., Ham. & Dayton; Dayt'n & Mich.; Cin., Ham. & Ind.; Cin., Rich. & Chicago	362	104	5,460	C. Neilson, Gen. Supt., W. F. Stark, Asst. Supt., G. W. Saul, Pur. Agt., Cincinnati, O.; C. H. Cory, Supt., M. P., Lima, O.; W. H. H. Allison, M. C. B., Cincinnati, O.
Cin., Ind., St. Louis & Chicago	415	81	3,257	M. E. Ingalls, Pres., Cincinnati, O.; G. W. Bender, Supt., Indianapolis, Ind.; G. Tozzer, Pur. Agt., J. S. Patterson, M. of Mach., Thos. Cassidy, M. C. B., Cincinnati, O.
Cin., Jackson & Mackinaw	343	26	1,128	J. M. C. Marble, Pres., F. B. Drake, Gen. Man., Toledo, O.; R. F. Marshall, M. M., Van Wert, O.
Cin., Lebanon & Northern	38	8	120	Geo. Hafer, Gen. Man. & P. A., F. E. Voight, M. M., Cincinnati, O.
Cin., New Orleans & Tex. Pac.	1,158	146	7,080	John C. Gault, Gen. Man.. Richard Carroll, Gen. Supt., R. W. Healy, Pur. Agt., Cincinnati, O.; James Meehan, S. M. P. & M., Ludlow, Ky.
Cin. So. Div	336	73	2,536	W. W. Wells, Supt., Somerset, Ky.; John Richardson, M. C. B., Ludlow, Ky.
Ala. Gr. So. Div	295	35	1,924	A. Griggs, Supt., J. G. Tomlinson, M. M., Chattanooga, Tenn.
N. O. & N. E. Div	196	17	1,599	Edmund L. Tyler, Supt., New Orleans, La.; I. W. Fowle, M. M., Meridian, Miss.
Vicks. & Mer. Div	142	14	360	H. F. Clark, Supt., Vicksburg, Miss.; I. W. Fowle, M. M., Meridian Miss.
V. S. & P. Div	189	15	661	H. F. Clark, Supt., Vicksburg, Miss.; J. P. McCuen, M.M., Monroe, La.

Vicks. &
V. S. & P. D

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Cin., Sandusky & Cleveland..				J. L. Moore, Gen. Man., Thos. Reynolds, Supt., F. G. Scofield, Pur. Agt., Jos. Porter, M. M., Sandusky, O.
Cin., Wabash & Mich.....	165	16	480	Norman Beckley, Gen Man. & P. A., Elkhart, Ind.; O. W. Lamport, Supt., S. B. Tinker, M. M. & M. C. B., Wabash, Ind.
Cin., Wabash & Baltimore ...	312	65	1,889	J. H. Stewart, Gen. Man. & P. A., Cincinnati, O.; Edw. Evans, M. M., Chillicothe, O.; T. G. Duncan, Supt. Car. Dept., Zaleski, O.
Cin., Wheeling & New York..	30	4	12	J. W. Campbell, Gen. Man., Cumberland, O.
Cin. & Muskingum Valley.. ..	148	17	342	F. G. Darlington, Supt., Zanesville, O.; W. Mullins, Pur. Agt., Pittsburgh, Pa.
Clarksb'g, West. & Glenville.	26	4	51	A. H. Kunst, Pres. & Gen. Man., Sam. A. Steele, M. M., Weston, W. Va.
Clev., Col., Cin. & Ind. & St. Louis and Dayton & Union	788	233	8,064	James D. Layng, Pres., G. M. Beach, Gen. Man., Edward Hill, Pur. Agt., W. F. Turreff, Gen. M. M., Cleveland, O.
Col. & Cin. Div.....				Robt. Blee, Supt., E. E. Hudson, M. M. & C. B., Cleveland, O.; J. H. Berry, Asst. M. M., Delaware, O.
Indianapolis Div.....				John O. Ewan, Supt., Indianapolis, Ind.; Wm. Garstang, M. M. & C. B., Brightwood, Ind.
Ind. & St. Louis.....				T. W. Burrows, Supt., St. Louis, Mo.; Wm. Garstang, M. M. & C. B., Brightwood, Ind.; W. P. Orland, Asst. M. M., Mattoon, Ill.
Day & Un.....				W. F. Stark, Supt., H. S. Gordon, For. M. Shops, Dayton, O.
Cleveland, Akron & Columbus	178	30	918	N. Monsarrat, Pres., G. Man. & P. A., Akron, O.; G. M. Taylor, M. M. & C. B., Mt. Vernon, O.
Cleveland, Lorain & Wheeling	158	31	3,378	Oscar Townsend, Gen. Man., Cleveland, O.; F. M. Townsend, Supt. & Pur. Agt., C. H. Waburton, M. M., Geo. Butts, For. Car Dept., Lorain, O.
Cleveland & Canton.....	161	26	1,036	H. A. Blood, Gen. Man., Cleveland, O.; John Bean, M. M., Canton, O.
Cleveland & Marietta.....	105	17	778	A. T. Wikoff, Pres. & Gen. Man., C. C. Pickering, Pur. Agt., W. G. Van Buskirk, M. M., Cambridge, O.
Cleveland & Western.....	56	3	43	W. C. Moberly, Gen. Man., C. W. Risley, Pur. Agt., W. D. Price, M. M., Delphos, O.
Clove Branch.....	8	1	61	C. L. Kimball, Supt. & P. A., Matteawan, N. Y.; G. D. Holmes, M. M. & C. B., Dutchess Jc., N. Y.
Cobourg, Blaiston & Marmora	47	3	50	T. P. Pearce, Man., J. Crozier, M. M. & M. C. B., Cobourg, Ont.
Cœur d'Alene.....	35	3	24	Frank George, Supt., C. H. Prescott, M. M., Mission, Idaho.
Colorado Midland.....	256	28	852	D. B Robinson, G. M., Colorado Springs, Col.; B. C. Bosworth, S. of Mach., Colorado City, Col.
Columbia & Puget Sound.....	45	9	175	J. L. Howard, G. S. & P. A., San Francisco, Cal., T. J. Milner, Asst. Supt., Wm. Campbell, M. M., Seattle, W. T.
Columbus, Hocking Val. & Tol.	325	90	5,200	Wm. P. Shaw, Gen. Man, J. H. Garaghty, Pur. Agt., Ira G. Hutchings, M. M., J. M. Rockafield, M. C. B., Columbus, O.
Tol. Div.....				M. T. Seymour, Supt, Columbus, O.
Hock. V. Div.....				M. P. L. Booth, Supt., Columbus, O.
Ohio River Div.....				C. D. Norris, Supt., Logan, O.
Columbus & Cin. Midland....	68	13	287	S. P. Peabody, Gen. M. & P. A., R. Bromley, M. M., Columbus, O.
Columbus & Eastern.....	95	11	1,063	F. J. Picard, Gen. Man., S. J. Calloway, Supt. & P. A., Columbus, O.
Concord.....	146	46	1,296	H. E. Chamberlin, Supt. & P. Agt., W. H. Alexander, Sup. Agt., J. T. Gordon, M. M. & C. B., Concord, N. H.
Conn. River and Ver. Val....	130	51	597	J. Mulligan, Supt. & Pur. Agt., W. H. Stearns, M. M. & M. C. B., R. Hitchcock, M. C. B., Springfield, Mass.
Coopers'n & Susquehanna Val	16	2	14	E. M. Harris, Pres., A. Gardner, M. M., Cooperstown, N. Y.
Cornwall.....	12	10	170	S. S. Neff, Supt., J. M. Graf, M. M., Levi Blonch, M. C. B., Lebanon, Pa.
Cornwall & Lebanon.....	22	10	53	Ned Irish, Supt. & P. Agt., E. J. Pettys, M. M., Lebanon, Pa.
Coudersport & P't Alleghany	17	3	80	B. A. McClure, G. Supt. & P. A., Coudersport, Pa.
Crescent Springs.....	25	2	50	David Joyce, Gen. Man., Lyons, Wis.; James Devereaux, Gen. Supt., Shell Lake, Wis.; C. I. Wickersham, Pur. Agt., Chicago, Ill.; Geo. Stone, M. C. B., Shell Lake, Wis.
Crooked Creek.....	22	2	11	Walter C. Willson, Gen. Man., Geo. W. Post, Pur. Agt., Lehigh, Ia.
Crown Point Iron Co.'s.....	13	3	135	A. L. Inman, Gen. Man., Plattsburg, N. Y.; H. L. Reed, A. G. M & P. A., Jas. McMann, Supt., C. W. Sanders, M. M. & C. B., Crown Point, N. Y.

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Cumberland Valley	125	28	566	J. F. Boyd, Supt., A. S. Hull, M. M., C. Wicke, M. C. B., Chambersburg, Pa.
Cumberland & Penn	55	28	625	P. L. Burwell, Gen. Supt. & P. A., Cumberland, Md.; L. S. Randolph, M. of M., Mt. Savage, Md.
Danville & New River	75	5	67	J. C. Wrenshall, Rec., G. K. Griggs, Supt., W. T. Whittaker, M. M., Danville, Va.
Dayton, Ft. Wayne & Chicago	261		2,800	J. E. Gimperling, G. S. & P. A., F. McCreery, M.M., J. S. Wiers, M. C. B., Dayton, O.
Delaware, Lackawanna & W.	889	518	35,976	Wm. F. Hallstead, Gen. Man., Scranton, Pa.; W. D. Hager, Pur. Agt., New York, N. Y.; Chas. Graham, Mas. Mach., Robt. McKenna, M. C. B., Scranton, Pa.
Utica Div				A. C. Salisbury, Asst. Supt., Thomas Thatcher, M. M., Utica, N. Y.
Morris & Essex Div.: Sus'x				A. Reasoner, Supt., Hoboken, N. J.; W. H. Lewis, M. M., Kingsland, N. J.; J. W. Baker, Mast. Car Rep., Dover, N. J.
Oswego & Syracuse Div.				A. N. Schwarts, Supt., James Buchanan, M. M., Syracuse, N. Y.
Syracuse, Bing. & N. Y.				A. H. Schwarts, Asst. Supt., Lewis Kistler, M. M., Syracuse, N. Y.
Cayuga Div		...		W. F. Halstead, Gen. Man., Scranton, Pa.
Buffalo Div				F. A. Seabert, Asst. Supt., F. B. Griffith, M. M., Buffalo, N. Y.
Delaware River	20	3	9	E. H. Green, Supt. & Pass. Agt., Pedricktown, N. J.
Delaware & Hudson Canal Co.	634	235	11,199	H. G. Young, Gen. Man., J. White Strong, Pur. Agt., R. C. Blackall, Supt. Mach., Albany, N. Y.
Susq. Div				D. C. Hammond, Supt., Albany, N. Y.; Thos. Howard, M. M., J. R. Skinner, M. C. B., Oneonta, N. Y.
Sar. & Ch. Divs				D. C. Hammond, Supt., Albany, N. Y.; J. L. Corey, M. M., Chr. Korner, M. C. B., Green Island, N. Y.
Pa. Div				R. Manville, Supt. & Pur. Agt., C. F. Retlew, M. M., T. Orchard, M. C. B., Carbondale, Pa.
Denver, Utah & Pacific	50	7	286	L. M. Fouts, Supt. and Pur. Agt., T. E. Shears, M. M., Denver, Col.
Denver, Texas & Gulf	140	8	287	C. F. Meek, Gen. Man., B. W. Grover, Supt. & P. A., Geo. Kirk, M. M. & M. C. B., Denver, Col.
Denver & Rio Grande	1,448	218	5,616	David H. Moffatt, Pres., S. T. Smith, Gen. Man., C. M. Hobbs, Pur. Agt., N. W. Sample, Supt. M. P. & M., Denver, Col.
1st Div				W. W. Borst, Supt., Pueblo, Col.
2d Div				Cole Lydon, Supt., Alamosa, Col.
3d Div				W. W. Borst, Supt., Pueblo, Col.
4th Div				R. M. Ridgway, Supt., Salida, Col.
Denver, Rio Grande & West.	369			C. D. Dodge, Gen. Man., Denver, Col.; W. H. Bancroft, Gen. Supt., S. C. Smith, M. M., Salt Lake City, Utah.
Des Moines & Kansas City	111	7	253	James Donahue, Supt. and P. A., Des Moines, Ia.; A. Van Werden, M. M. & C. B., Osceola, Ia.
Des Moines & Ft. Dodge	144	13	350	C. N. Gilmore, Supt., Des Moines, Ia.; John McGrayel, M. M., Grand Junction, Ia.
Des Moines & Northwestern.	115	10	432	Geo. W. Ogilvie, Supt. & P. A., J. F. Morse, M. M., Des Moines, Ia.
Det., Bay City & Alpena	200	17	660	Milo Eastman, Gen. Supt., East Tawas, Mich.; T. H. Newberry, Pur. Agt., Detroit, Mich.; H. T. Thomas, M. M., Tawas City, Mich.
Det., Gr. H. & Mil	189	41	1,300	W. J. Spicer, Gen. Man., A. B. Atwater, Supt., J. S. Lorimer, Storekeeper, H. Roberts, Mech. Supt., Detroit, Mich.
Det., Lansing & Northern	272	44	1,027	John B. Mulliken, Gen. Man., Allen Bourn, Pur. Agt., Detroit, Mich.; Thos. M. Fish, Gen. Supt., G. C. Watrous, Act. M. M. & C. B., Ionia, Mich.
Duluth, So. Shore & Atlantic.	309	76	4,500	Andrew Watson, G. Supt. & P. A., Geo. T. Jarvis, Supt., John B. Wilson, M. S., Marquette, Mich.
Duluth & Iron Range	96	18	736	G. H. White, Gen. Supt., Two Harbors, Minn.; Robt. Spencer, Pur. Agt., Chicago, Ill.; E. Chadwick, M. M., Two Harbors, Minn.
Dunkirk, Alleghany Val. & P.	91	11	102	D. Thayer, Gen. Supt. & P. Agt., J. C. Haggett, M. M. & C. B., Dunkirk, N. Y.
East Alabama	22	2	13	W. W. Barnes, Supt., Opelika, Ala.
East Broad Top	40	8	273	A. W. Sims, Supt., A. W. Greenwood, M. M., Orbisonia, Pa.
East Tenn. & West'n N. Car.	34	3	73	C. H. Nimson, Gen. Supt., Cranberry, N. C.; M. W. Lindawood, M. M., Johnson City, Tenn.
East Tenn., Vir. & Georgia	1,032	156	5,608	Sam'l Thomas, Pres., C. S. Brice, V. Pres., New York, N. Y.; Henry Fink, V. Pres., C. H. Hudson, Gen. Supt., J. E. Wilcox, Pur. Agt., W. H. Thomas, Supt. M. P., Knoxville, Tenn.
E. Tenn., No. Car. & Ohio				F. K. Huger, Supt., J. B. Michael, M. M. & C. B., Jos. Armbruster, M. C. B., Knoxville, Tenn.

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East Tenn. Va. & Georgia. Alabama Div.				J. M. Bridges, Supt., C. L. Petrikin, M. M., Jas. Bossinger, M. C. B., Selma, Ala.
Memphis & Charleston		54	1,193	C. H. Hudson, Gen. Man., Knoxville, Tenn.; R. B. Pegram, Jr., Supt., N. H. Burford, M. M., W. D. Minton, M.C.B., Memphis, Tenn.
Georgia Div.				E. H. Barnes, Supt., C. F. Thomas, M. M., A. H. Corinth, M. C. B., Atlanta, Ga.
East and West R.R. of Ala.	117	17	200	John Postell, Gen. Man., J. J. Calhoun, Pur. Agt., Cartersville, Ga.; F. Northcut, M. M. & C. B., Cedartown, Ga.
Eastern	283	110	2,268	*(See Boston & Maine.)*
Eastern Kentucky	34	4	50	H. W. Bates, Man. & Pur. Agt., Greenup, Ky.; H. W. Crawford, M. M., Hunnewell, Ky.
Elmira, Cortland & Northern	140	23	173	A. A. McLeod, Gen. Man., Albert Allen, Gen. Supt., Elmira, N. Y.; Edw. Mahler, Pur. Agt., Philadelphia, Pa.; Thos. Kearsley, M. M. & M. C. B., Cortland, N. Y.
Erie & Huron	74	5	54	E. O. Bickford, Pres., Toronto, Ont.; J. J. Ross, Gen. Man. & P. A., G. R. Jouglines, M. M., Sarnia, Ont.
Erie & Wyoming Val.	48	27	200	John B. Smith, Pur. Agt., A. Crane, M. M., G. N. Simpson, M. C. B., Dunmore, Pa.
Eureka Springs	19	2	8	Powell Clayton, Gen. Man., J. B. Obenshain, M. M., Eureka Springs, Ark.
Eureka & Palisade	97	7	125	B. Gilman, Gen. Supt. & Pur. Agt., Eureka, Nev.; J. M. Crawford, M. M., A. S. Longley, M. C. B., Palisade, Nev.
Evansville & Terre Haute	156	33	2,419	D. J. Mackey, Pres. & P. A., W. D. Ewing, Gen. Man., John Torrance, M. M., J. T. McCallan, M. C. B., Evansville, Ind.
Eutawville	35	3	22	I. W. Fowler, Gen. Man., Eutawville, S. C.
Fall Brook Coal Co. Pine Creek; Corning, Cowanesque & Antrim; Cowanesque Br.; Syracuse, Geneva & Corning; Geneva & Lyons; and N. Y. & Penn Yan	280	60	3,000	G. R. Brown, Gen. Supt., W. H. Chaphe, Pur. Agt., Wm. A. Foster, Supt. M. P. & Mach., C. J. Butler, M.C.B., Corning, N. Y.
Fitchburg	344	175	5,653	E. B. Phillips, Pres., John Adams, Gen. Supt., Geo. J. Fisher, Pur. Agt., Boston, Mass.; Orlando Stewart, Supt. M. P., J. W. Marden, Supt. C. Dept., Charlestown, Mass.:
Fitchburg Div.				J. R. Hartwell, Supt., Boston, Mass.
Tunnel Div.				J. F. Adams, Supt., Fitchburg, Mass.
Western Div.				J. Crandell, Supt., Troy, N. Y.; John Medway, M. M., Mechanicsville, N. Y.
Worcester Div.				H. A. Phillips, Supt., Worcester, Mass.
Flint & Pere Marq	362	80	2,836	H. C. Potter, Gen. Man., D. Edwards, Asst. Gen. Man., G. G. Cook, Pur. Agt., Sanford Keeler, Gen. Supt., W. F. Potter, Asst. Supt., T. J. Hatswell, M. M., E. Saginaw, Mich.
Florida Ry. & Nav. Co.	530	37	952	H. R. Duval, Rec., Jacksonville, Fla.; R. S. Lukenbill, Pur. Agt., W. D. Ballentine, M. M. & C. B., Fernandina, Fla.
Florida Southern	295	25	307	Sherman Conant, Gen. Man., J. A. Larnerd, Supt., Palatka, Fla.; Cleveland Foot, Pur. Agt., New York, N. Y; Wm. Rutherford, M. M., Palatka, Fla.
Fonda, Johnston & Gloversv.	26	5	35	Lawton Caten, Supt., G V. Putman, M.M., Gloversville, N. Y.
Ft. Madison & No.-Western	45	3	100	C. A. Gilchrist, Gen. Man. & P.A., L. F. Huntsman, M. M., Ft. Madison, Ia.
Ft. Scott, Wichita & Western	306	16	320	A. W. Dickinson, Gen. Supt., St. Louis, Mo.; R. Harding, Supt., Wichita, Kan.; A. Gould, Pur. Agt., St. Louis, Mo.; Henry Berger, M. M., Reese, Kan.
Ft. Worth & Denver City	163	12	410	C. F. Meek, Gen. Man., Denver, Col.; R. J. Duncan, Gen. Supt. & P.A., E. P. Henderson, M.M., Ft. Worth, Tex.
Ft. Worth & Rio Grande	40	3	60	O. B. Colton, Supt., Ft. Worth, Tex.
Freehold & New York	14	4	39	J. E. Ralph, Supt., & Pur. Agt., M. C. Mooney, M. M., C. H. Snedeker, M.C.B., Freehold, N. J.
Fremont, Elkhorn & Mo. Val.	1,155	66	1,485	W. F. Fitch, Gen. Man., W. C. Halsey, Gen. Supt., Missouri Valley, Ia.; R. W. Hamer, Pur. Agt., Chicago, Ill.; S. A. Teal, M.M., Missouri Val., Ia.
Fulton County N. G.	61	4	168	A. C. Atherton, Gen. Supt. & P. Agt., Lewiston, Ill.
Gainsville, Jeff. & So.	52			A. D. Candler, Pres., Gainesville, Ga.
Galveston, Sabine & St. Louis	22	2	23	R. J. Evans, Rec., Geo. Spaulding, M. M., Longview, Tex.
George's Creek & Cumberland	33	6	414	J. A. Millholland, Gen. Man. & P.A., Thos. McCann, M. M. & M. C. B., Cumberland, Md.

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Georgetown & Western	36	2	45	J. R. Mew, Gen. Supt., Georgetown, S. C.
Georgia	307	47	985	John W. Green, Gen. Man., S. A. Hemphill, Supt., John S. Cook, M.M., Augusta, Ga.
Gainesville, Jefferson & So..	65	4	43	
Georgia, Midland & Gulf	98	7	137	M. E. Gray, Supt. & P.A., I. D. McPhail, M.M. & C. B., Columbus, Ga.
Georgia Pacific	356	48	1,536	John W. Johnson, Pres., I. Y. Sage, Gen. Supt., J. H. Garner, Supt. 1st Div., W. J. Parrish, Supt. 2d Div., Birmingham, Ala.; S. H. Purcell, Supt. 3d Div., Greenville, Miss.; W. F. Newman, M. M., Birmingham, Ala.
Gettysburg & Harrisburg	43		35	Wm. H. Woodward, Supt., J. Christman, M.M., John Faller, M.C.B., Carlisle, Pa.
Grand Rapids & Indiana	570	66	3,083	W. O. Hughart, Gen. Man., W. R. Shelby, Pur. Agt., S. D. Bradley, M.M., Grand Rapids, Mich.
North. Div.				J. M. Metheany, Supt., Grand Rapids, Mich.
South. Div.				P. S. O'Rourke, Supt., Fort Wayne, Ind.
Grand Southern	82	5	54	J. N. Greene, Gen. Man., F. W. Holt, Supt., J. E. Lynott, Pur. Agt., Thos. Logan, M.M., St. George, N. B.
Grand Tower & Carbondale	26	6	300	J. D. Peters, Supt., Carbondale, Ill.; Jno. W. Lewis, M.M., Murphysboro, Ill.; O. L. Garrison, Pur. Agt., St. Louis, Mo.
Grand Trunk	2,918	709	18,832	Joseph Hickson, Gen. Man., Wm. Wainright, Asst. Man., Jno. Taylor, Gen. Storekeeper, Montreal, Can.
Grand Trunk Div.				J. Stephenson, Supt., Herbert Wallis, Mech. Supt., Wm. McWood, A. M. S. Car Dept., Montreal, Can.; J. W. Harkom, A. M. S. E. Div., Richmond, P. Q.; A. H. Smith, A. M. S. C. D. Div., Toronto, Can.; F. L. Wanklyn, A. M. S. Lo. Works, Montreal, Can.
Great Western Div.				Charles Stiff, Supt., Hamilton, Ont.; E. Baines, Deputy Storekeeper, London, Ont.; C. K. Domville, Mech. Supt., A. A. Maver, Asst. M. C. H., Supt., Hamilton, Ont.; J. D. McIlwain, Asst. M. C. H. Supt., London, Ont.
Midland Div.	471	44	1,423	J. M. Riddell, Supt., Peterboro, Ont.; J. D. Barnett Asst. Mech. Supt., Port Hope, Ont.
North & N. West. Div.	489	50	1,195	Samuel Barker, Supt., W. C. Schriber, Pur. Agt., P. Clark, M.M., Toronto, Ont.
Green Bay, Winona & St. P.	249	19	433	G. Campbell, Gen. Man. & P. A., Green Bay, Wis.; A. Fenwick, M. M., Ft. Howard, Wis.
Gulf, Col. & Santa Fe	1,020	79	2,347	Webster Snyder, Gen. Man., John W. Thorne, Pur. Agt., M. T. Carson, M. M. & M.C.B., Galveston, Texas; C. M. Baker, M.M., Cleburne, Tex.; M. T. Carson, Asst. M.M., Temple, Tex.
Gulf, W'n Texas & Pac.				*(See Southern Pacific.)*
Hancock & Calumet	21	5	127	Chas. A. Wright, Supt., R. H. Bielsford, Pur. Agt., John Shields, M.M., Chas. Angie, M.C.B., Hancock, Mich.
Hannibal & St. Jo.	297	76	1,906	W. F. Merrill, Gen. Man., St. Joseph, Mo.; S. E. Crance, Supt., Brookfield, Mo.; Wm. Irving, Gen. Pur. Agt., Chicago, Ill.; N. J. Paradise, M. M.; Hannibal, Mo.; I. N. Wilbur, Div. M.M., Brookfield, Mo.; G. M. Shryock, M.C.B., Hannibal, Mo.
Harrisburg & Potomac	41	3	41	R. H. Middleton, Supt., Boiling Springs, Pa.
Hartford & Con. W'n	110	18	525	E. McNeill, Supt. & Pur. Agt., A. J. Broughel, M.M., Chas. H. Keen, M.C.B., Hartford, Ct.
Herkimer, Newport & Poland	17	2	22	Albert Wilber, Supt., Herkimer, N. Y.; E. D. Fake, M.M., Middleville, N. Y.
Housatonic	126	26	1,088	W. H. Stevenson, V. P. & G. M., Wm. K. Lyon, Gen. Supt. & P. A., Bridgeport, Ct.; H. Ryder, Supt. M.P., J. J. Ferris M.C.B., Falls Village, Ct.
Dan. & Nor. Div.	36	7	164	F. C. Payne, Supt., Danbury, Ct.
Houston, E. & W. Tex. and Shreveport & Houston	192	16	570	M. G. Howe, Gen. Man., J. C. Matthews, Supt., E. A. Campbell, M. M., Houston, Tex.
Houston & Tex. Cen.	788	97	2,214	A. H. Swanson, Gen. Transp. Man., Houston, Tex.; R. J. Phillips, Pur. Agt., New York, N. Y.; L. C. Noble, Gen. M.M., James McGee, M.C.B., Houston, Tex.; C. H. Burns, Act. M. M., Corsicana, Tex.
Humeston & Shenandoah	113	18	80	E. C. Murphy, Gen. Man. & P. A., Clarinda, Ia.; J. S. Hazen, M. M. & C. B., Shenandoah, Ia.
Huntingdon & Br. Top Mt.	65	22	568	Geo. F. Gage, Gen. Man., Huntingdon, Pa.; Samuel B. Knight, Pur Agt., Philadelphia, Pa.; William Barkla, M.M., Saxton, Pa.
Illinois Central	2,461	407	12,210	E. T. Jeffery, Gen. Man., C. A. Beck, Gen. Supt., O. Ott, Pur. Agt., Henry Schlacks, Supt. of Mach., Wm. Renshaw, Asst. S. M., W. B. Snow, M. M. Car Works, Chicago, Ill.

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(1) Ill. & Ia. Lines				T. J. Hudson, Supt., Chicago, Ill.
Chic. Div				A. W. Sullivan, Supt., Cairo, Ill.; C. S. Clark, Act. M. M., Chicago, Ill.
Mid. Div				H. L. Frisbie, Supt., Pontiac, Ill.
Spring. Div				W. Wilkinson, Supt., Springfield, Ill.; Wm. Griffin, M.M., Clinton, Ill.
North'n Div				J. C. Jacobs, Supt., J. B. Edams, M.M., Amboy, Ill.
Iowa Div				M. Gilleas, Supt., Dubuque, Ia.; Thos. W. Place, M.M., Waterloo, Ia.
(2) South. Lines				J. G. Mann, Supt., New Orleans, La.
La. Div				J. M. Turner, Supt., W. B. McKenna, M.M., McComb City, Miss.
Miss. Div				H. W. Clarke, Supt., Jackson, Tenn,; T. J. Price, M.M., Water Valley, Miss.
Aberdeen Div				J. B. Kemp, Supt., Aberdeen, Miss.
Rantoul Div		7	102	J. T. Jones, M. M. & C. B., Rantoul, Ill.
Illinois Midland	173	14	200	D. H. Conklin, Gen. Man. & P. Agt., Decatur, Ill.; F. Young, M.M., Paris, Ill.
Illinois & St. Louis	29	10	450	C. H. Sharman, Gen. Supt. & P. Agt., St. Loui , Mo.; D. J. Timlin, M.M., Belleville, Ill.; Chas. Rothe, M.C.B., East St. Louis, Ill
Indiana, Illinois & Iowa	120	14	127	F. M. Drake, Pres., T. P. Shonts, Gen. Man.; L. H. Miller, M. M. & M. C. B., Kankakee, Ill.
Indiana & Illinois Southern	96	9	220	P. H. Blue, Gen. Man. & P. Agt., Sullivan, Ind.
Ind., Decatur & Western	152	18	1,052	H. B. Hammond, Pres., L. A. Boyd, Act. Supt., C. B. McVay, Pur. Agt., J. McKenna, M.M., Indianapolis, Ind.
Intercolonial	956	190	5,361	David Pottinger, Chief Supt., T. V. Cooke, Gen. Storekeeper, H. A. Whitney, Mech. Supt., D. White, Car For., Moncton, N. B.
M. & C. Dist				J. E. Price, Supt., Campbellton, N. B.
Hal. & St. J. Dist				J. J. Wallace, Supt., Truro, N. B.
Q. & St. F. Dist				A. R. McDonald, Supt., Riv du L. P. Q.
International	82	5	35	Henry Ansell, M.M., Sherbrooke, P. Q.
Jacksonville, So.-E'n L	311	18	430	E. S. Greenleaf, Supt., W. J. Hemphill, M. M. & C. B., Jacksonville, Fla.
Jacksonv'l, Tampa & Key W.	238	23	187	G. W. Bentley, Gen. Man., M. R. Moran, Supt. & P. A., Jacksonville, Fla.; E. T. Silvius, M.M., Palatka, Fla.
St. Aug. Div				W. L. Crawford, Supt., Jacksonville, Fla.
Ind. Riv. Div				W. S. Sneden, Supt., Sanford, Fla.
Jacksonville & Atlantic	17	2	21	Julius Hayden, Supt., J. E. Clark, M. C. B., Jacksonville, Fla.
Jeffersonv'l, Mad. & Ind'polis				*See* (9) *Pa. Co.*
Kanawha & Ohio	126	14	541	M. Sweeney, Gen. Supt., W. F. Bradley, M. M. & C. B., Kanawha, W. Va.
Kan. City, Ft. Scott & Gulf	382	78	2,374	Geo. H. Nettleton, Gen. Man., J. R. Hardy, Supt., H. P. Jacques, Pur. Agt., J. S. McCrum, M.M., A. N. Monteer, M. C. B., Kansas City, Mo.
Kan. City, Mem. & Birming'm.	275	23	794	Geo. H. Nettleton, Pres. & G. M., Kansas City, Mo. John H. Sullivan, Supt., Memphis, Tenn.; H. P. Jacques, Pur. Agt., Kansas City, Mo.; R. H. Briggs, M.M., Memphis, Tenn.
Kan. City, Spring. & Memphis	283	24	2,238	Geo. H. Nettleton, Pres., W. W. Fagan, Supt., H. P. Jacques, Pur. Agt., J. S. McCrum, S. M. P. & M., A. N. Monteer, M.C.B., Kansas City, Mo.
Kan. City, St. J. & Cou'l Bluffs	324	43	1,194	W. F. Merrill, Gen. Man., G. M. Hohl, Supt., St. Joseph, Mo.; E. G. Fish, Asst. Supt., Kansas City, Mo.; Wm. Irving, Gen. Pur. Agt., Chicago, Ill.; F. A. Chase, M.M., Thos. Aylesbury, M. C. B., St. Joseph, Mo.
Kan. City, Wyan. & No.-W'n.	132	13	290	E. Summerfield, Supt. & P. A., W. E. Ramsey, M.M., Wyandotte, Kan.
Kansas City & Pacific	95	4	540	T. Penfield, Gen. Man. & P. A., W. E. Hanson, Supt., Parsons, Kan.
Kansas City & Southern	67	5	70	Wm. Bailey, Pres. & G. M., St. Louis, Mo.; F. M. Green, Pur. Agt., Clinton, Mo.
Kent Northern & St. Louis	35	2	19	J. C. Brown, Gen Man. & P. A., E. E. Phair, Supt., E. Amerieux, M.M., Richibucto, N. B.
Kentucky Central	252	27	645	H. E. Huntington, Gen. Man., S. R. Tuggle, M.M., Covington, Ky.
Kentucky & South Atlantic	23	3	52	J. D. Yarrington, Gen. Man., M. S. Kelly, M.M., Mt. Sterling, Ky.
Keokuk & Western	148	12	761	A. C. Goodrich, G. M. & Pur. Agt., Keokuk, Ia.; W. Augustus, M. M. & M. C. B., Centerville, Ia.
Kingston & Pembroke	104	10	320	B. W. Folger, Supt., F. Conway, Pur. Agt., F. Clark, M.M., Kingston, Ont.
Knox & Lincoln	50	6	128	Wm. L. White, Supt., Wm. A. Field, M.M., C. L. Turner, M. C. B., Bath, Me.
Knoxville & Augusta	16	2	38	R. N. Hood, Gen. Man. & P. Agt., M. McShoble, Supt., Knoxville, Tenn.

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Lack. & Pittsburgh	100	10	400	Geo. D. Chapman, Rec., W. H. Badger, Supt. & P. Agt., L. T. Johnson, M. M. & M. C. B., Angelica, N. Y.
Lake Erie, Alliance & South.	61	3	65	E. E. Scranton, Supt. & P. Agt., David Dorman, M.M., C. P. Finch, M. C. Repairer, Alliance, O.
Lake Erie & Western	550	82	2,940	Geo. L. Bradbury, Gen. Man., D. S. Hill, Gen. Supt., T. H. Perry, Pur. Agt., Indianapolis, Ind.; P. Reilly, Supt. of Equipment, Lima O.
Lake Shore & Mich. Southern	1,340	526	16,993	John Newell, Pres., Edward Gallup, Gen. Man., P. P. Wright, Gen. Supt., L. G. Higgins, Pur. Agt., G. W. Stevens, Supt. M. P., John Kirby, Gen. M. C. B., Cleveland, O.
Eastern Div.				C. B. Couch, Supt., Cleveland, O.; John Robinson, M.M., A. C. Robson, M. C. B., Buffalo, N. Y.; J. S. Graham, M.M., J. Withycombe, M. C. B., Cleveland, O.
Frank. Div.				G. H. McIntire, Supt., Youngstown, O.
Toledo Div.				Thos. Flesher, Jr., Supt., Cleveland, O.; J. M. Sanborn, M.M., W. O. Smith, M. C. B., Norwalk, O.
Mich. Divs.				T. J. Charlesworth, Supt., Toledo, O.
Detroit Branches				S. S. Hand, Supt., Detroit, Mich.
Lansing, Ypsil'ti & Ft. W.				W. H. Caniff, Supt., Hillsdale, Mich.
Western Div.				A. G. Amsden, Supt., Chicago, Ill.; W. L. Gilmore, M.M., Elkhart, Ind.; Frank O. Bray, M. C. B., Adrian, Mich.
Grand Rapids Branch				T. F. Whittelsey, Supt., Grand Rapids, Mich.
Lehigh Valley	720	412	40,372	H. S. Goodwin, Gen. Supt., Bethlehem, Pa.; W. C. Alderson, Pur. Agt., Philadelphia, Pa.; John I. Kinsey, M.M., South Easton, Pa.; A. Mitchell, M.M., Wilkes-Barre, Pa.; David Clark, M.M., Hazelton, Pa.; P. H. Hofecker, M.M., Weatherly, Pa.; John Campbell, M.M., Delano, Pa.; A. Mitchell, Div. Supt., Wilkes-Barre, Pa.; J. I. Blakslee, Div. Supt., Mauch Chunk, Pa.; Jas. Donnelly, Div. Supt., Perth Amboy, N. J.; A. G. Brodhead, Div. Supt., Mauch Chunk, Pa.; A. P. Blakslee, Div. Supt., Delano, Pa.; John S. Lentz, M. C. A., Packerton, Pa.
Pa. & N. Y. and Geneva, Ithaca & Sayre				Wm. Stevenson, Gen. Supt., J. N. Weaver, M.M., Sayre, Pa.; John S. Lentz, M. C. B., Packerton, Pa.; H. D. Titus, Div. Supt., Auburn, N. Y.; I. O. Blight, Div. Supt., Towanda, Pa.
Lehigh & Hudson River	63	9	565	Grinnell Burt, Gen. Man., N. L. Furman, Supt., John Sayre, Pur. Agt., S. Mills, M M., Warwick, N. Y.
Ligonier Valley	11	2	22	Thos. A. Mellon, Gen. Man., Pittsburgh, Pa.; Geo. Senft, Supt. & P. A., S. L. French, M.M., Latrobe, Pa.
Little Rock & Memphis	135	14	299	R. Fink, Pres. & Gen. Man., Little Rock, Ark.; A. Gordon Jones, Supt., Memphis, Tenn.; Thos. Rennell, M. M. & M. C. B., Argenta, Ark.
Little Saw Mill Run	8	4	300	T. Hartley, Gen. Man., C. Schoenman, Pur. Agt., D. Owen, M.M., A. C. Younger, M. C. B., Banksville, Pa.
Long Island	356	112	1,160	I. D. Barton, Gen. Supt., L. F. Brigham, Pur. Agt., C. A. Thompson, M.M., Long Island City, N. Y.
Louisville, Evansville & St. L.	254	26	1,204	Geo. F. Evans, Gen. Man., W. H. Folsom, Pur. Agt., Louisville, Ky.; W. A. Stone, M.M., Huntingburgh, Ind.
Louisv'le, New Albany & Chi.	479	60	3,700	John B. Carson, V. P. & Gen. Man., W. R. Woodard, Gen. Supt., A. Butze, Gen, Pur. Agt., Chicago, Ill.; H. Watkeys, Supt. M. P., Chas. Coller, M. C. B., New Albany, Ind.; W. H. Adams, Supt. Trans., Lafayette, Ind.
Louisv'le, New Orleans & Tex.	533	73	1,884	Jas. M. Edwards, Gen. Man., A. M. Cooke, Pur. Agt. Benj. Wilson, Supt., Memphis, Tenn.; E. D. Anderson, M.M., R. G. Nicoll, Asst. M.M., J. J. Casey, M.C.B., Vicksburg, Miss.
Louisville & Nashville	2,422	426	12,871	J. T. Harahan, Gen. Man., Geo. E. Evans, Supt. of Trans., P. P. Huston, Pur. Agt., Harvey Middleton, Supt. Mach., Louisville, Ky.
Louisville Div.				P. T. Downs, Supt., P. Leeds, M.M., Louisville, Ky.
Louisv., Cin. & Lex. Div.				J. C. Loomis, Supt., Wm. Adair, M.M., Louisville, Ky.
Nash. Div.				J. Geddes, Supt., Nashville, Tenn.; W. P. Pike, M.M., So. Nashville, Tenn.; H. M. Lund, M.M., Bowling Green, Ky.; Z. J. Ferguson, M.M., Jackson, Tenn.
S. & N. A. Div.				Donald Allen, Supt., F. W. Dunn, Asst. Supt., C. F. Giles, M.M., Birmingham, Ala.
Mob. & M.; U. Div. P. & S.				B. C. Epperson, Supt., Montgomery, Ala.; J. G. Clifford, M.M., Mobile, Ala.

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Louisville & Nashville.				
N. O. & M. Div.				C. Marshall, Supt., New Orleans, La.; J. G. Clifford, M.M., Mobile, Ala.
Memphis Line Div.				O. M. Dunn, Supt., J. V. Slusser, M.M., Memphis.
C. & P. Div.				J. F. Grarey, Supt., Clarksville, Tenn.; H. M. Lund, M.M., Bowling Green, Ky.
St. Louis & Hend. Div.				J. G. Metcalfe, Supt., W. M. Newbold, Asst. Supt., Evansville, Ind. Thos. Walsh, M.M., Mt. Vernon, Ill.; W. P. Pike, M.M., Edgefield, Tenn.
Pensacola Div.				E. O. Saltmarsh, Supt., A. Beckert, M.M., Pensacola, Fla.
Macon & Brunswick				*(See E. Tenn., Va. & Ga.; At. & Ga. Divs.)*
Maine Central	535	86	2,178	Payson Tucker, Gen. Man., Portland, Me.; Amos Pillsbury, M.M., C. H. Kenison, M.C.B., Waterville, Me.
Manhattan	32	260	918	Frank K. Hain, G. M. & P. A., W. T. Goundie, Supt. Trans., T. W. Peeples, M.M., H. A. Webster, M.C.B., New York, N. Y.
Manitoba & Northwestern	208	6	164	W. R. Baker, Supt. & Pur. Agt., T. A. Summerskill, M.M., Portage la Prairie, Man.
Maricoba & Phenix	35	2	21	C. S. Masten, V. P. & Man., F. I. Kendall, Pur. Agt., M. S. Webb, M.M., Phenix, Ariz.
Marietta, Columbus & North.	40	4	53	R. E. Phillips, Gen. Man., W. R. Utley, Pur. Agt., J. M. Sheets, M.M., A. S. Hale, M.C.B., Marietta, O.
Marietta & North Georgia	106	7	150	J. B. Glover, Gen. Supt. & P. Agt., Chas. Chester, M.M., Marietta, Ga.
Maryland Central	45	7	150	W. Gilmor, S. Spencer, Receivers, G. W. Maslin, Supt. & Pass. Agt., W. J. Kane, M.M., John Barnet, M.C.B., Baltimore, Md.
Mason City & Ft. Dodge	91	5	130	C. C. Burdick, Supt. & P. A., Barnard Reiley, M.M. & M. C. B., Mason City, Ia.
Meadville & Linesville	20	2	11	T. A. Delamater, Supt. & P. A., W. R. Fordyce, M. M. & M. C. B., Meadville, Pa.
Mexican	293	42	616	E. W. Jackson, Gen. Man., Geo. Foote, Gen. Supt., Mexico, Mex.
Mexican Central	1,324	94	2,609	Theo. Nickerson, Pur. Agt., Boston, Mass.; E. W. Jackson, Gen. Man., D. MacKenzie, Gen. Supt., F. W. Johnstone, Supt. M. P. & M., J. H. O'Brien, M.C.B., City of Mexico: S. B. Burton, Div. Supt., Silao, Mex.; S. O. Lewis, Act. Div. Supt., Jimulco, Mex.; R. E. Comfort, Div. Supt., Paso del Norte, Mex.; E. V. Sedgwick, M.M., Silao, Mex.; J. S. Turner, M.M., Jimulco, Mex.; W. L. Wallace, M.M., Chihuahua, Mex.
Tampico Div.				E. A. Whorf, Supt., Tampico, Mex. [*P. O. Address of all Officers in Mexico is El Paso, Tex.*]
Mexican National	906	50	1,283	
Northern General Div.				D. C. Dodge, V.P., Henry Yonge, Gen. Supt., Mexico, Mex.; J. C. Munro, Supt. M. P. & M., Laredo, Tex.; T. Milan, M.M., Corpus Christi, Tex.
Metamoras Div.				W. W. Mayberry, Asst. Supt., Brownville, Tex.
Galveston Div.				W. R. Chisholm, Asst. Supt., Galveston, Tex.
Southern Gen Div.	392	47	900	Geo. Bernard, Pur. Agt., New York, N. Y.; J. M. Winslow, M.M., Mexico, Mex.
Zacatecas Div.				W. S. Kyle, Supt., Zacatecas, Mex.
Michigan Central	1,598	404	12,438	H. B. Ledyard, Pres. & Gen. Man., E. C. Brown, Gen. Supt., Robert Miller, A. G. S. & G. M. C. B., Allen Bourn, Pur. Agt., Detroit, Mich.; C. E. Smart, Gen. M.M., Jackson, Mich.
(1) Lines West Detroit River:				
Eastern Div.				D. S. Sutherland, Supt., O. A. Pierce, M.M., Detroit, Mich.
Bay City, Sag., M. & S. Bay & N. W. Divs.				W. A. Vaughan, Supt., M. Ryan, M.M., Bay City, Mich.
Mid. Div. Air Line: Grand Rap.; So. Bend; and So. Hav. Divs.:				C. B. Bush, Supt., Jackson, Mich.
West & Joliet Divs.				R. H. L'Hommedieu, Supt., J. G. Riley, M.M., Chicago, Ill.
(2) Lines East Detroit River.				J. B. Morford, Supt., M. L. Flynn, M.M., Robert Potts, M. C. B., St. Thomas, Ont.
Mil., Lake Shore & Western	576	99	3,284	H. F. Whitcomb, Gen. Man., J. Donohue, Supt., H. W. Reighley, Pur. Agt., Milwaukee, Wis.; John Hickey, M.M., Kaukauna, Wis.
Milwaukee & Northern	305	29	700	C. F. Dutton, Gen. Man., Milwaukee, Wis.; N. S. Kimball, M.M., Fort Howard, Wis.
Mineral Range	17	5	97	Geo. H. Stayner, Pres., C. A. Wright, Gen. Man. & Supt., R. H. Brelsford, Pur. Agt., John Shields, M.M., Chas. Angie, M. C. B., Hancock, Mich.
Minn., Lyndale & Minnetonka	10	18	57	C. A. Goodrich, Man., M. Austin, Supt., Wm. Tweede, M.M., Minneapolis, Minn.

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Minneapolis, S. Ste. Marie & Atlantic and Minneapolis & Pacific	787	38	2,236	F. D. Underwood, Gen. Man., W. T. Watkins, Pur. Agt., Thos. A. Fraser, M.M., W. S. Haines, Gen. For. Mach., Minneapolis, Minn.
Minneapolis & St. Louis	570	72	2,060	W. H. Truesdale, Pres., T. E. Clarke, Gen. Supt., W. B. Palmer, Pur. Agt., G. F. Wilson, M. M. & M. C. B., Minneapolis, Minn.
Missisquoi Valley	28			W. C. Smith, Pres., T. M. Deal, Supt., St. Albans, Vt.
Mississippi & Tenn	100	13	297	M. Burke, Gen. Supt. & P. Agt., J. C. Ramsey, M.M., S. J. Bolton, M. C. B., Memphis, Tenn.
Missouri Pacific (Leased and operated lines.)	6,696	795	24,568	S. H. H. Clark, 1st V. P. & G. M., A. W. Dickinson, Gen. Supt., A. Gould, Pur. Agt., O. A. Haynes, Insp. L. C. & M., S. Irvin, M. C. B., St. Louis, Mo.
(1) Missouri Pacific	2,594	308	11,036	H. G. Clark, Supt., Sedalia, Mo.; J. B. Flanders, Div. Supt., Harrisonville, Mo.; H. G. Clark, Div. Supt., St. Louis, Mo.; J. W. Dalby, Div. Supt., Kansas City, Mo.; L. Bartlett, M M., St. Louis, Mo.; S. P. Weller, Asst. M.M., Sedalia, Mo.; H. Berger, M.M., W. D. Lowry, For. C. D., Fort Scott, Kan.; S. Irvin, M. C. B., C. A. Williams, G. For. C. D., St. Louis, Mo.
(2) M. K. & T. in Texas (North of Denison.)	1,577	179	5,851	J. J. Frey, Supt., Parsons, Kan.; W. B. Lyons, Div. Supt., Sedalia, Mo.; J. W. Dickinson, Div. Supt., Denison, Tex.; M. N. Beatty, Div. Supt., Pueblo, Col.; Wm. O'Herin, M.M., Parsons, Kan.; R. Walker, Gen. For. C. D., Sedalia, Mo.
South of Denison				Thos. Humes, Supt., San Antonio, Tex.; A. W. Dickerson, Div. Supt., Denison, Tex.; R. J. Duncan, Div. Supt., Greenville, Tex.; F. Reardon, M.M., John Doyle, For. C. D., Denison, Tex.
(3) Central Branch Union Pac	388	35	586	W. B. Doddridge, Supt., R. H. Emerson, M.M., Atchison, Kan.; A. Studer, Div. M.M., Downs, Kan.; J. W. Blackburn, For. C. D., Atchison, Kan.
(4) St. Louis, Iron Mo'nt. & So	1,142	169	4,919	R. E. Ricker, Gen. Supt., St. Louis, Mo.
L. R. & Fort Smith	170	16	439	J. Herrin, Gen. Supt., St. Louis, Mo.; T. W. Kennan, Supt. Mo. Div., W. H. Harris, M.M., Mo. Div., De Soto, Mo.; J. T. Whedon, Supt. Ark. Div., R. M. Richardson, M.M., Ark. Div., Little Rock, Ark.
(5) Int. & Great Northern	825	88	1,687	C. W. Kouns, Supt., S. H. Spangler, M.M., W. P. Siddons, Gen. For. C. D., Palestine, Tex.
Mobile & Ohio	687	88	2,429	Jas. C. Clark, Vice-Pres. & Gen. Man., R. H. Duesberry, Pur. Agt., Mobile, Ala.; Geo. D. Harris, Supt. M. P., Jackson, Tenn.; J. E. Capps, M.C.B., Whistler, Ala.
Mobile Div				D. McLaren, Supt., Mobile, Ala.; C. E. Slade, M.M., Whistler, Ala.
St. Louis Div				Chas. Hamilton, Supt., St. Louis, Mo.; Z. J. Ferguson, M.M., Jackson, Tenn.
Moline & Southeastern	8	2	26	R. Battersly, Gen Man., Henry Daublin, M.M., Robt. Lyman, M. C. B., Coal Valley, Ill.
Mont Alto	21	2	8	G. B. Wiestling, Supt. & P. Agt., Mont Alto, Pa.
Montana Union	59	15	217	N. J. T. Dana, Pres., G. W. Dickinson, Supt., Geo. Ross, M. M. & C. B., Butte, Mont.
Montour	12	2	130	F. L. Shallenberger, S. & P. A., Wm. Balch, M. C. B., Imperial, Pa.
Montpelier & Wells River	38	4	117	W. A. Stowell, Supt., F. W. Morse, Pur. Agt., C. C. Field, M.M., C. F. Robinson, M. C. B., Montpelier, Vt.
Mount Washington	3	6	6	Walter Aiken, Gen. Man., Franklin, N. H.; John Horn, M.M., Lake Village, N. H.
Napanee, Tam. & Que	32	2	37	Ed. W. Rathbun, Gen. Man., R. C. Carter, Asst. Gen. Man., J. A. Davis, M.M., Wm. Evans, C.B., Deseronto, Ont.
Narragansett Pier	8	2	12	G. T. Lamphear, Supt. & Pur. Agt., E. Gardiner, M.M., Peacedale, R. I.
Nashville, Chat. & St. Louis	95	90	2,434	J. W. Thomas, Pres. & Gen. Man., J. W. Thomas, Jr., Pur. Agt., James Cullen, M. M. & C. B., Nashville, Tenn.
Natchez, Jackson & Col	100	7	85	T. J. Nicholl, Gen. Man. & P. A., H. V. Wilkins, M. M. & M. C. B., Natchez, Miss.
Nevada & California	45	3	31	E. Gest, Gen. Man., J. M. Fulton, Pur. Agt., Reno, Nev.
Nevada Central	93	4	86	C. W. Hinchcliffe, Rec., Supt. & P. A., Austin, Nev.; W. E. Kellen, M. M., Battle Mountain, Nev.
Nevada County N. G	23	3	49	John F. Kidder, Gen. Man., Edw. H. Brown, Supt., Jas. McCormick, M. M. & C. B., Grass Valley, Cal.
New Brunswick	447	46	1,328	F. W. Cram, Gen. Man. & Pur. Agt., St. John, N.B.; Geo. A. Haggerty, Mech. Supt., McAdam, N. B.

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New Haven & Derby.....	13	5	76	J. P. Hopson, Supt., L. J. Bradley, Pur. Agt., H. I. Kittendorf, M. M. & C. B., New Haven, Conn.
New Jersey & New York.....	37	8	40	J. D. Hasbrouck, Gen. Man., Jersey City, N. J.; J. S. Drake, Supt. & M. M., L. B. Van Wagner, M. C. B., Hillsdale, N. J.
New Mexico & Arizona.....	88			A. A. Robinson, Gen. Man., Topeka, Kan.; H. T. Richards, Supt., Benson, Ariz.
New Orleans & Carrollton....	15	18	70	C. V. Haile, Supt., John Dahmer, M.M., C. Kamm, M. C. B., New Orleans, La.
New Orleans & Gulf.....	30	4	53	M. R. Spelman, Supt. & P.A., New Orleans, La.; S. Crow, M. M. & M. C. B., Poydras, La.
Newport News & Miss. Valley Co.: Eastern Div.....	140	16	517	J. D. Yarrington, 2d V. Pres., Lexington, Ky.; J. T. Odell, Gen. Supt., H. S. Emmons, Pur. Agt., T. L. Chapman, Supt. M. P., Richmond, Va.; W. T. Smith, M.M., H. C. Bossinger, M. C. B., Huntington, W. Va.
Western Div.....	398	73	1,908	John Echols, 3d V. P. & G. M., J. L. Frazier, Supt., Louisville, Ky.; H. E. Huntington, Pur. Agt., New York, N. Y.; J. W. Luttrell, M. M. & C. B., Louisville, Ky.
N. Y. Central & Hudson Riv..	3,688	853	30,187	J. M. Toucey, Gen. Supt., Theo. Voorhees, Asst. Gen. Supt., Chas. Reed, Pur. Agt., Wm. Buchanan, Supt. M. P. & R. Stock, New York, N. Y.
Mohawk—Hudson Div....				C. M. Bissell, Supt., Albany, N. Y.; J. H. Phyfe, Ass't Supt., New York, N. Y.; F. H. Phillips, Asst. Supt., Little Falls, N. Y.; P. McQ. Gibson, M. M., W. H. Wolfrath, M. C. B., New York, N. Y.; L. Packard, M. C. B., W. Albany, N. Y.
Harlem Div.....				G. H. Worcester, Supt., New York, N. Y.
Western Div.....				Geo. H. Burrows, Supt., Buffalo, N. Y.: S. L. White, M.M., Syracuse, N. Y.; Amos Gould, M.M., E. Chamberlain, M.C.B., E. Buffalo, N. Y.; Peter Smith, M.C.B., E. Rochester, N.Y.
N. Y., Chic. & St. L.....	524	108	7,245	Lewis Williams, Gen. Supt., M. M. Rodgers, Pur. Agt., John Mackenzie, Supt. M.P., Cleveland, O.
Eastern Div.....				G. H. Kimball, Supt., Cleveland, O.; E. A. Miller, M.M., Conneaut, O.
Western Div.....				C. D. Gorham, Supt., Ft. Wayne, Ind.; W. H. Lewis, M. M., Stony Island, Ill.
N. Y., Lake Erie & Western.				E. B. Thomas, V. Pres., Cleveland, O.; J. W. Cloud, Supt. M. P. & M., Buffalo, N. Y.
(1) N. Y., L. E. & W. Div....	1,097	486	31,024	W. J. Murphy, Gen. Supt., Jersey City, N. J.; E. B. Sheffer, Pur. Agt., New York, N. Y.
Eastern Div.....				J. H. Barrett, Supt., Geo. W. West, M.M., J. N. Mileham, M.C.B., Jersey City, N. J.
Delaware Div.....				W. H. Starr, Supt., J. Van Vechten, M.M. & C. B., Port Jervis, N. Y.
Susquehanna Div.....				W. B. Coffin, Supt., Elmira, N. Y.; V. Blackburn, M. M., Susquehanna, Pa.; D. B. Goodell, Gen. For., Elmira, N. Y.
Buffalo Div.....				Wm. Litz, M.M., Robt. Gunn, For. C. Rep., Buffalo, N. Y.
Rochester Div.....				G. A. Thompson, Supt., Rochester, N. Y.
Western Div.....				E. F. Knibloe, Supt., J. Hawthorne, M.M., Hornellsville, N. Y.
N. Y. & Greenwood Lake....	44	8	23	J. H. Barrett, Supt., J. H. Vreeland, M.M., J. N. Mileham, M.C.B., Jersey City, N. J.
(2) N. Y., Pa. & O. Div.....	565	221	7,794	J. R. Shaler, Gen. Supt., Cleveland, O.; John W. Cloud, Supt. M. P., Buffalo, N. Y.: Ross Kells, A.S.M.T., Cleveland, O.: D. S. Dockstader, For. C. D., Kent, O.
Eastern Div.....				Chas. A. Brunn, Supt., W. Laverty, M.M., Meadville, Pa.
Western Div.....				S. F. Randall, Supt., J. S. McCool, M.M., Geo. Wilson, For. Car. Rep., Galion, O.
Maho'g Div.....				J. F. O'Brien, Supt., Youngstown, O.; S. Higgins, M.M., Cleveland, O.
N. Y., New Haven & Hartf'd.	535	199	4,386	Chas. P. Clark, Pres., E. M. Reed, V. Pres., O. M. Shepard, Gen. Supt., H. A. Bishop, Pur. Agt., New Haven, Conn.; W. H. Turner, Supt. N. Y. Div., New York, N. Y.
Hartford Div.....				C. S. Davidson, Supt., Hartford, Conn.
Shore Line Div.....				E. G. Allen, Supt., New Haven, Conn.
Air Line Div.....				W. A. Waterbury, Supt., J. Henney, Jr., Supt. M.P., Jas. Denver, M.C.B., New Haven, Conn.
Naugatuck Div.....	66	18	613	Geo. W. Beach, Supt., Bridgeport, Conn.
Northampton Div.	170	28	584	C. N. Yeamans, Supt., Henry Fox, M.M., J. Sweeny, For. Car Shops, New Haven, Conn.
Valley Div.....				J. V. A. Trumbull, Supt., Hartford, Conn.
N. Y. Ontario & Western..	440	75	2,136	J. E. Childs, Gen. Man., New York, N. Y.; R. D. Rickard, Pur. Agt., H. Tandy, Supt. M. P., E. Minshull, M. M. & C. B., Middletown, N. Y.

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
N. Y., Philadelphia & Norfolk	112	11	156	H. W. Dunne, Supt., W. A. Patton, V. P. & P. A., C. O. Skidmore, M.M., Cape Charles, Va.
N. Y., Providence & Boston.	83	31	440	S. D. Babcock, Pres., Geo. M. Miller, V. Pres., Jacob W. Miller, Gen. Man., New York, N. Y.; J. B. Gardiner, Supt., L. M. Butler, M. M. & C. B., Providence, R. I.
N. Y., Rutland & Montreal...	58	7	51	J. H. Dunn, Supt., Bennington, Vt.; Wm. H. Brown, M.M., Chatham, N. Y.
N. Y., Susqueh'na & Western.	155	39	1,982	F. A. Potts, Gen. Man., New York, N. Y.; C. D. McKelvey, Supt., Jersey City, N. J.; C. T. Demarest, Pur. Agt., New York, N. Y.; W. C. Ennis, M. M. & C. B., Wortendyke, N. J.
New York & Massachusetts.	40	4	60	J. A. Perkins, S. & P. Agt., J. L. Donaldson, M.M., Poughkeepsie, N. Y.
New York & New England...	471	164	4,707	A. A. Jackson, Gen. Supt., R. E. Rockwell, Pur. Agt., J. B. Henney, Supt. M. P., Boston, Mass.
Eastern Div.....				R. E. Eavenson, Supt., Boston, Mass.
N. & W. Div.....				P. St. M. Andrews, Supt., S. F. Whaley, M.M., Norwich, Conn.
Providence Div.....				L. W. Palmer, Supt., Providence, R. I.
Western Div.....				C. H. Platt, Supt., E. M. Humstone, M.M., Hartford, Conn.
Woonsocket Div.....				E. H. Tucker, Supt., Needham, Mass.
New York & Northern...	58	17	220	E. B. Edwards, Gen. Supt., Thos. Millen, M.M., High Bridge, N. Y.
New York & Sea Beach.	6	7	49	A. H. Mann, Man. Dir., New York, N. Y.; J. T. Nelson, Pur. Agt., F. Jacobus, Act. Supt., Bay Ridge, N. Y.
Newburg, Dutchess & Conn..	58	8	251	C. L. Kimball, Gen. Supt., & P. A., Matteawan, N. Y.; Gilman D. Holmes, M. M. & C. B., Dutchess Junction, N. Y.
Norfolk Southern.....	74	8	203	M. K. King, Gen. Man. & Pur. Agt., J. S. Whitworth, M. M. & C. B., Norfolk, Va.
Norfolk & Va. Beach.....	18	4	28	T. O Troy, Gen. Supt., F. O. Clibourne, M. C. B., Norfolk, Va.
Norfolk & Western.	540	150	5,241	Jos. H. Sands, Gen. Man., W. C. De Armond, Pur. Agt., S. B. Haupt, Supt. M. Power, Roanoke, Va.
East Div.....				N. M. Osborne, Supt., Norfolk, Va.; N. W. Norsworthy, M.M., Petersburg, Va.
West Div.....		..		Frank Huger, Supt., Lynchburg, Va.; N. H. Smith, M.M., Lovely Mount, Va.
North Pacific Coast.....	84	12	320	E. H. Shoemaker, Supt., W. F. Russell, Pur. Agt., San Francisco, Cal.; W. J. Thomas, For. Loco. Shops, Saucelito, Cal.
Northern California....	26	2	22	A. J. Binney, Gen. Man. & P.A., E. S. Wright, M.M., B. F. Davis, M. C. B., Marysville, Cal.
Northern Pacific.....	3,221	423	10,236	T. F. Oakes, V. P. & Gen. Man., Jno. H. Ames, Gen. Pur. Agt., W. T. Small, Supt. M. P., M. & R. S., J. C. Barber, M. C. B., Como. Shops, St. Paul.
Eastern Div.....				S. R. Ainslie, Asst. Gen Man., St. Paul, Minn.
Dakota Div.....				J. M. Graham, Supt., Jamestown, Dak.; S. L. Bean, M.M., Fargo, Dak.
Missouri Div				F. Greene, Asst. Supt., W. B. Warren, M.M., Mandan, Dak.
St. P. Div. & L. F. & Dak.				M. C. Kimberly, Supt., Minneapolis, Minn.
St. Paul & Minn. Divs.....				A. Bardsley, M.M., Brainerd, Minn.
E. & W. Minn. & Wis. Divs. and N. P. F. & B. H.....				N. D. Root, Supt., Brainerd, Minn.
Yellowstone Div.....				J. D. Finn, Supt., Angus Brown, M.M., Glendive, Mont.
Montana Div.....				Robt. Low, Supt., C. W. Rossiter, M.M., Livingston, Mont.
Western Div.....				J. M. Buckley, Asst. Gen. Man., John Evans, A. S, Mach., Tacoma, W. T.
R. M. Div.....				F. W. Gilbert, Supt., B. Haskell, M.M., Missoula, Mont.
Idaho Div				F. P. Weymouth, Supt., Wm. Moir, M.M., Sprague, W. T.
P. & C. Div.				C. P. Cole, Supt., A. M. Miller, M.M., Tacoma, W. T.
Northern & Western.....	116	6	92	J. B. Snowball, Pres., Chatham, N. B.; Alex. Gibson, Gen. Man., Marysville, N. B.
Ohio, Indiana & West'n	542	97	4,588	C. E. Henderson, Rec., I. H. Wilson, Gen. Supt., Hunter Gunnell, Pur. Agt., Indianapolis, Ind.; Jos. S. Porter, Div. M.M., Sandusky, O.; John King, Gen. M. M., Indianapolis, Ind.; E. Heserodt, Div. M. M., Urbana, Ill.
Ohio River.....	213	19	759	C. L. Williams, Asst. Supt., E. E. Jenks, M.M., Parkersburg, W. Va.
Ohio Southern.....	118	26	2,116	W. H. Van Tassel, Supt., Springfield, O.; John King, M.M., Indianapolis, Ind.

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Ohio Valley	100	7	200	James Montgomery, Supt., W. J. Torrance, M.M., Wm. Halpin, M. C. B., Henderson, Ky.
Ohio & Mississippi	616	115	3,063	J. F. Barnard, Pres. & Gen. Man., C. C. F. Bent, Supt., G. W. Stevens, Pur. Agt., Cincinnati, O.; F. P. Boatman, M. of R. S., Vincennes, Ind.
Springfield Div				C. M. Stanton, Asst. Supt., Springfield, Ill.; J. W. Stokes, F. R. S. (Springfield Div.), Pana, Ill.
Ohio & Northwestern	97	9	200	J. C. Homer, Supt. M. P., Portsmouth, O.
Old Colony	483	140	3,521	J. R. Kendrick, Gen. Man., R.W. Husted, Pur. Agt., Jas. N. Lauder, Supt. R. S., Boston, Mass.
Main Line Div				J. H. French, Supt., F. M. Twombly, M.M., Boston, Mass.
Cap Cod Div				C. H. Nye, Supt., Hyannis, Mass.; F. M. Twombly, M.M., Boston, Mass.
Northern Div				I. N. Marshall, Supt., Fitchburg, Mass.; A. W. Twombly, M.M., Taunton, Mass.
Olympia & Chehalis Valley	20	3	12	F. R. Brown, Gen. Man. & P. A., F. Tillotson, M.M., Olympia, W. T.
Omaha & St. Louis	166	2	4	A. E. Buchanan, Supt. & P. A., J. D. Hunter, M.M., Council Bluffs, Ia.
Orange Belt	150	10	70	P. A. Demans, Supt., C. M. Stickles, M.M., H. Kaufman, M. C. B., Oakland, Fla.
Oregon Pacific	101	16	343	Wm. M. Hoag, Gen. Man., I. Hulme, M. M. & M. C. B., Corvallis, Ore.
Oregon Ry & Navigation Co.	753	72	1,598	W. H. Holcomb, Gen. Man., C. W. Johnson, Supt., E. Hoyt, Pur. Agt., Portland, Ore.; Goodall, Perkins & Co., Supt. (Ocean Div.) San Francisco, Cal.; H. N. Webber, Gen. M. M., The Dalles, Ore.
Oregonian	160	8	200	C. N. Scott, Rec. & G. Man., J. Healy, M. M. & C. B., Portland, Ore.
Oregon & California	449	43	638	R. Koehler, Man., J. Brandt, Gen. Supt., W. T. Bodley, Pur. Agt., A. Brandt, M.M., Portland, Ore.
Ottumwa & Kirkville	12	1	11	H. L. Waterman, Gen. Man., Ottumwa, Ia.
Owensboro & Nashville	88	7	43	E. H. Mann, Supt., P. Ryan, Gen. For. Shops, Owensboro, Ky.
Pacific Coast	79	5	200	J. M. Fillmore, Man. & P. A., Jas. Walch, M. M. & C. B., San Luis Obispo, Cal.
Panama	48	14	2,200	A. L. Rives, Gen. Supt., Aspinwall, U. S. Col.; E. Z. Penfield, Pur. Agt., New York, N. Y.; Joseph Beaumont, M.M., Aspinwall, U. S. Col.
Passumpsic	147	28	1,157	H. E. Folsom, Supt., A. M. Stone, M.M., Lyndonville, Vt.
Peach Bottom	20	3	20	G. Renie Dickey, Supt. & Pur. Agt., W. R. Shellmire, M.M., Oxford, Pa.
Pennsylvania Co., operating Pitts., Ft. Wayne & Chic.; Massillon & Cleve; South Chicago & South'n; Pitts., Youngs'tn & Ashtabula; Cleveland & Pitts.; Erie & Pitts; N Castle & Bea. Val.; and N. West. Ohio.; Gen. Divs., 1, 2, 3, 4 and 5	991	460	27,361	James McCrea, Gen. Man., Joseph Wood, G. S. Trans., E. B. Taylor, Gen. Supt., Wm. Mullins, Pur. Agt., Pittsburgh, Pa.; F. D. Casanave, Supt. M. P., Fort Wayne, Ind.
Pittsburgh, Ft. Wayne & Chic.	468	298	8,533	
(1) Eastern Div				A. B. Starr, Supt., Geo. J. Parkin, M.M., Alleghany, Pa.; D. M. Peppard, M.M., Crestline, O.
(2) Western Div		...		C. D. Law, Supt., Geo. L. Potter, M.M., Fort Wayne, Ind.; A. H. Somers, Gen. For. Shops, Chicago, Ill.
(3) Erie & Ashtabula Div	220	29	1,672	John M. Kimball, Supt., Lawrence Junction, Pa.; J. A. Wood, Gen. For. Shops, Erie, Pa.
(4) Cleveland & Pittsburg Div	198	97	3,621	John Thomas, Supt., W. F. Beardsley, M.M., Wellsville, O.
(5) Toledo Div				J. S. Morris, Supt., Toledo, O
Pennsylvania (7 Gen. Divs.)	3,561	1,665	54,385	Chas. E. Pugh, Gen. Man., Enoch Lewis, Pur. Agt., S. M. Prevost, Gen. Supt. Trans., Philadelphia, Pa.; Theo. N. Ely, Gen. S. M. P., Altoona, Pa.
(1) Pennsylvania Divs				Robert E. Pettit, Gen. Supt., Frank L. Sheppard, Supt. M. P., G. W. Strattan, M.M., John P. Levan, Gen. For. Car Shops, Altoona, Pa.
Philadelphia Div				Tho. Tucker, Supt., H. D. Garrett, M.M., I. W. Van Houten, Gen. For. Car Shops, W. Philadelphia, Pa.
Schuylkill Div				Jas. Reed, Supt., Reading, Pa.
Mid. Div				O. E. McClellan, Supt., E. L. Caum, M.M., Samuel W. Myers, Gen. For. Car Shops, Harrisburg, Pa.
Altoona Div				J. B. Hutchinson, Supt., Altoona, Pa.
Pittsburgh Div				Robt. Pitcairn, Supt., D. O. Shaver, M.M., Pittsburgh, Pa.; R. Zane, M.M., Conemaugh, Pa.
West Pa. Div				A. P. Kirtland, Supt., Wm. B. Norris, M.M., M. H. Fails, Gen. For. Car Shops, Blairsville, Pa.

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Pennsylvania.				
Fred. Div.				Wilson Brown, Supt., York, Pa.; A. O. Baker, M.M., Columbia, Pa.
Tyrone Div.				S. S. Blair, Supt., W. H. Carothers, M.M., Tyrone, Pa.
Lewistown Div.				Wm. M. Phillips, Supt., Isaiah Paxson, M.M., Lewistown, Pa.
Bedford Div.				R. L. Holliday, Supt., Bedford, Pa.: Andrew Green, M.M., State Line, Pa.
Monong. Div.				David M. Watt, Supt., Pittsburgh, Pa.; Wm. Lininger, M.M., Ormsby, Pa.
(2) United R. R.'s of N.J. Divs.				F. Wolcott Jackson, Gen. Supt., H. S. Hayward, Supt. M. P., Jersey City, N. J.; H. Canfield, M.M., Hoboken, N. J.
New York Divs.				Jos. Crawford, Supt., James W. Sanford, M.M., Jersey City, N. J.
Belville Div.				F. Ellmaker, Supt., R. McDowell, M.M., Lambertville, N. J.
Amboy Div.				W. N. Bannard, Supt., Camden, N. J.; Thos. Kerr, M.M., So. Amboy, N. J.; W. McAllister, MM., Camden, N. J.; P. S. Bogart, Gen. For., So. Amboy, N. J.
(2½) Camden & Atlantic.	75	18	261	A. O. Dayton, Gen. Supt., Rufus Hill, M.M., Camden, N. J.
(3) West Jersey.	188	27	294	A. O. Dayton, Gen. Supt., C. C. Williams, M.C.B., Camden, N. J.
(5) Phil., Wilmington & Balt.				H. F. Kenney, Gen. Supt., J. M. Wallis, S.M.P., Philadelphia, Pa.; H. D. Gordon, M.M., W. H. Lungren, M.C.B., Wilmington, Del.
Central Div.				L. K. Lodge, Supt., Media, Pa.
Delaware Div.				I. N. Mills, Supt., Clayton, Del.
Maryland Div.				H. H. Carter, Supt., Wilmington, Del.
(5) Philadelphia & Erie Divs.				R. Neilson, Gen. Supt., Edward D. Nelson, Supt. M. P., Williamsport, Pa.
Eastern Div.				E. B. Westfall, Supt., Williamsport, Pa.
Summit Div.				A. Walter, Supt., H. K. Stout, M.M., Sunbury, Pa.
Mid. Div.				Tho. A. Roberts, Supt., Wm. L. Holman, M.M., Renovo, Pa.
Western Div.				J. W. Reynolds, Supt., J. Gaskill, M.M., Erie, Pa.
(6) Northern Central.				Robt. Neilson, Gen. Supt., Edward D. Neilson, Supt. M. P., Williamsport, Pa.; A. W. Sumner, Pur. Agt., J. M. Coale, M. M.; G. W. Demarest, Gen For., Baltimore, Md.
Susquehanna Div.				E. B. Westfall, Supt., Williamsport, Pa.
Sham. Div.				A. Walter, Supt., Sunbury, Pa.
Elmira & Canada Divs.				S. Meade, Supt., Jas. Strode, M.M., J. C. Dyott, Gen. For., Elmira, N. Y.
Baltimore Div.				H. W. Kapp, Supt., Baltimore, Md.
(7) Balt. & Pot. & Alex. & Fred.				H. H. Carter, Supt., Wilmington, Del.; A. W. Sumner, Pur. Agt., Baltimore, Md.; J. M. Wallis, Supt. M. P., Philadelphia, Pa.; H. D. Gordon, M.M., Wilmington, Del.; J. Lescallett, For. Mach. Shop, R. F. Downs, For. Car Shop, Washington, D. C.
Peoria, Decatur & Evansville.	254	30	2,400	W. D. Ewing, Gen. Man., Evansville, Ind.; W. H. Keran, Supt., Mattoon, Ill.; D. J. Mackey, Pur. Agt., Evansville, Ind.; Frank C. Smith, Gen. M.M., R. Atkinson, Div. M.M., Mattoon, Ill.
Peoria & Pekin Union.	20	12	156	Thos. B. Burnett, Gen. Supt. & P. A., Jas. W. Hill, M. M. & C. B., Peoria, Ill.
Phila., Newtown & New York	22			W. M. Geary, Supt., Howard Boyd, Pur. Agt., Philadelphia Pa.
Philadelphia & Atlantic City.	54			A. A. McLeod, Gen. Man., Samuel Garwood, Supt., H. C. Norton, Pur. Agt., Philadelphia, Pa.
Philadelphia & Reading.	865	604	26,458	A. A. McLeod, V. P. & Gen. Man., I. A Sweigard, Gen. Supt., H. C. Norton, Pur. Agt., Philadelphia, Pa.; G. W. Cushing, Supt. M. P. & R. E., H. J. Small, Asst. Supt. M. P., J. H Rankin, M. C. B., Reading, Pa.
Maine Line Div.				R. B. Cable, Supt., Reading, Pa.
No. Penn. & Bound Brook				M. F. Bonzano, Supt., Philadelphia, Pa.
Mahanoy Div.				C. M. Lawler, Supt., Shamokin, Pa.
Catawissa Div.				W. G. Yetter, Supt., Catawissa, Pa.
Pine Grove Div.				H. W. Tracy, Supt., Pine Grove, Pa.
Reading & Columbia Div.				A. M. Wilson, Supt., Columbia, Pa.
Pitts., Chartiers & Yough'ny.	17	4	325	Geo. S. Griscom, Gen. Man., G. S. Davison, Supt. C. R., Pittsburgh, Pa.
Pittsburgh, Cin. & St. Louis. (5 Gen. Divs.)	954	265	7,454	James McCrea, Gen. Man., Pittsburgh, Pa.; John F. Miller, Gen. Supt., Columbus, O.; Wm. Mullins, Pur. Agt., Pittsburgh, Pa.; Edward B. Wall, Supt. M. P., S. P. Bush, Asst. Supt. M. P., J. L. Copeland, Gen. F. C. Shops, Columbus, O.

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Pittsburgh, Cin. & St. Louis.				
(1) P., C. & St. L. Div.				J. J. Turner, Supt., Pittsburgh, Pa.; C. B. Street, M.M., Denison, O.; J. M. Copeland, Gen. For. Car Shops, Steubenville, O.
(2) C. & M. V.				F. G. Darlington, Supt., Zanesville, O.
(3) Li. Mi. Div.				Ralph Peters, Supt., Leroy Kells, M.M., Jos. Underwood, G. F. Car Shops, Cincinnati, O.
(4) J. M. & I.				W. F. Black, Supt., Louisville, Ky.
(5) Indianapolis & Vincennes				M. W. Mansfield, Supt., Indianapolis, Ind.
Pittsburgh, Marion & Chicago	25	3	48	N. F. Wood, Gen. Man., New Lisbon, O.
Pitts. & Castle Shannon.	9	5	428	John Jahan, Gen. Supt., Pittsburgh, Pa.; Holmes Ward, M.M., Castle Shannon, Pa.; R. A. A. Patterson, M. C. B., Pittsburgh, Pa.
Pittsburgh & Lake Erie. (Lessees Pitts., McK. & Yough)	135	62	2,003	John Newell, Pres. & Gen. Man., Cleveland, O.; E. Holbrook, Gen. Supt., R. Evans, Pur. Agt., L. H. Turner, M. M. & M. C. B., Pittsburgh, Pa.
Pittsburgh & Western.	372	71	2,995	
Pitts., Bradford & Buffalo	93	24	598	J. T. Johnson, Supt., Alleghany, Pa.; Jas. Callery, Pur. Agt., Pittsburgh, Pa.; W. M. Flahavan, M.M., Alleghany, Pa.
Pontiac, Oxford & Pt. Austin.	100	5	122	James Houston, Gen. Supt., W. C. Sanford, Pur. Agt., F. H. Neward, M.M., G. S. Cadogan, M. C. B., Pontiac, Mich.
Pontiac Pacific Junction.	73	4	70	J. T. Prince, Gen. Supt. & P. A., G. W. Pangborn, M.M., Aylmer, Can.
Port Huron & Northwestern.	218	14	288	H. McMorran, Gen. Man. & P. A., I. R. Wadsworth, Supt., Chas. Diefenbach, M.M., Benj. Hillier, M. C. B., Port Huron, Mich.
Port Jervis, Monticello & N.Y.	24	3	13	Chas. Clark, Supt., Port Jervis, N. Y.
Portland & Ogdensburg.	91	15	623	J. Hamilton, Gen. Supt. & P. A., M. L. Babb, M.M., W. G. Brewer, M. C. B., Portland, Me.
Portland & Rochester.	52	8	268	J. W. Peters, Supt. & Pur. Agt., E. H. C. Thompson, M.M., Portland, Me.
Potomac, Fred'g & Pied.	38	2	40	W. H. Richards, Gen. Man., W. P. Johnson, M.M., Fredericksburg, Va.
Poughkeepsie, Hart. & Boston	40	4	60	J. A. Perkins, Supt. & P. A., John L. Donaldson, M.M., Poughkeepsie, N. Y.
Prescott & Arizona Central.	74	2	35	Thos. S. Bullock, Pres. & Gen. Man., L. H. Wilson, Pur. Agt., J. E. Morse, M.M., Prescott, Ariz.
Prince Edward Island.	210	21	339	James Coleman, Supt. & Pur. Agt., Jos. Unsworth, M. Supt. & Storekeeper, D. M. Fraser, M. C. B., Charlottetown, P. E. I.
Providence, Warren & Bristol	14	7	74	Waterman Stone, Supt., Providence, R. I.; Rufus Smith, M. M. & C. B., Bristol, R. I.
Providence & Springfield.	23	4	105	Wm. Tinkham, Gen. Man., J. C. Bradford, M.M., Providence, R. I.
Providence & Worcester.	44	39	1,867	Chas. Howard, Supt. & P. A., A. Griggs, Supt. L. & C. D., Providence, R. I.
Pullman Palace Car Co.			1,400	George M. Pullman, Pres., Chicago, Ill.; Horace Porter, V. Pres., New York, N. Y.; Geo. F. Brown, Gen. Man., T. H. Wicks, Gen. Supt., Wm. A. Angell, Pur. Agt., Chicago, Ill; S. W. Bretzfield, Asst. Pur. Agt., New York, N. Y.; H. H. Sessions, Man., Pullman, Ill; H. L. Spaulding, Man. (Det. Shops) Detroit, Mich; J. W. Scarborough, Gen. For. St. Louis, Mo.; A. J. Drake, Gen. For., Wilmington, Del.
Quebec Central.	156	10	267	J. R. Woodward, Gen. Man., A. Steele, Supt., A. H. Anderson, Pur. Agt.; Jas. Selveright, M.M., Sherbrooke, P. Q.
Quebec & Lake St. John.	170	13	140	J. G. Scott, Man. & P. A., Quebec, Can.; Patrick Allen, Supt., M. Wakefield, M.M., St. Raymond, P. Q.
Quincy, Missouri & Pacific.	136	5	92	F. D. Schermerhorn, Gen. Man. & Pur. Agt., Quincy, Ill.
Raleigh & Gaston.	107	29	671	John M. Robinson, Pres., Baltimore, Md.; John C. Winder, Gen. Man., Wm. Smith, Supt., B. R. Harding, M. of M., Raleigh, N. C.
Raleigh & Augusta Air Line.	119			
Carolina Central.	268	24	453	Jas. Maglenn, M. of M., Laurinburg, N. C.
Richmond, Fred'g & Potomac	81	17	149	E. T. D. Myers, Gen. Supt., T. L. Courtney, Supt., I. T. Bryant, M.M., W. H. Trainham, M.C.B., Richmond, Va.
Richmond & Alleghany.	256	22	841	Decatur Axtell, Rec. & Gen. Man., W. A. Crawley, Pur. Agt., W. Hassman, M. M. & M. C. B., Richmond, Va.
Richmond & Danville.	2,416	312	4,941	Peyton Randolph, Gen. Man., Wm. H. Green, Gen. Supt., J. P. Minetree, Pur. Agt., R. D. Wade, Supt. M. P., Washington, D. C.
Richmond & Danville Div.	541	111	2 761	W. B. Ryder, Supt., T. W. Gentry, M.M., Richmond, Va.
Atlanta & Char. Air Line.	419	30	441	
Narrow Gauge Branches.	89	5	41	

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Richmond & Danville.				
West North Carolina Div.	360	39	341	Edmund Berkley, Supt., A. W. Gibbs, M.M., Atlanta, Ga.
Chester & Lenoir	109	3	91	
Cheraw & Chester	29	3	21	G. R. Talcott, Supt., J. H. Green, M.M., Columbia, S. C.
South Carolina Div	393	24	332	
Columbia & Greenv'le Div.	298	19	205	G. R. Talcott, Supt., J. H. Green, M.M., Columbia, S. C.
Virginia Midland Div.	355	57	883	
Wash. Div	50	3	136	Robt. Andrews, Supt. & Eng., H. M. Smith, M.M., Alexandria, Va.
Western North Car. Div.	360	21	183	V. E. McBee, Supt., Ashville, N. C.; G. W. Gates, M.M., Salisbury, N. C.
Richmond & Petersburg	23	8	71	R. M. Sully, Supt., Petersburg, Va.; John O'Brien, M.M., Manchester, Va.; W. J. Acree, M.C.B., Petersburg, Va.
Rio Grande	22	3	42	Simon Celaya, Gen. Man., Geo. W. Rendall, M.M. & M. C. B., Brownsville, Tex.
Rock Island & Peoria	113	14	310	C. Lynde, Pres., H. B. Sudlow, Supt. & Pur. Agt., Rock Island Ill.; Jos. Elder, M.M., Peoria, Ill.
Rome (Ga.)	20	2	17	Eben Hillyer, Pres. & Supt., O. W. Harbin, M.M., Rome, Ga.
Rome, Watert'n & Ogdensb'g	655	91	2,481	H. M. Britton, Gen. Man. & Pur. Agt., Geo. H. Haselton, S. M. P. & M., Oswego, N. Y.
Eastern Div.				H. W. Hammond, Supt., Carthage, N. Y.
Eastern & Mid. Div.				W. S. Jones, Supt., Watertown, N. Y.
Western Div.				F. J. Britton, Asst. Supt., Oswego, N. Y.
Rumford Falls & Buckfield	27	3	76	L. L. Lincoln, Supt. & Pur. Agt., Canton, Me.
San Antonio & Aransas Pass	210	15	180	B. F. Yoakum, Gen. Man. & Pur. Agt., W. H. Reilly, Supt. M. P., San Antonio, Tex.; E. S. Marshall, M.M., Yoakum, Tex.
San Francisco & North Pac.	101	13	331	H. C. Whiting, Vice-Pres., Supt. & Pur. Agt., San Francisco, Cal.; Ed. Reynolds, M. M. & C. B., Tiburon, Cal.
Sandy River	18	3	36	N. B. Beal, Pres. & Supt., M. Saunders, M. M. & C. B., Phillips, Me.
San Pete Valley	33	2	53	Theo. Brubaek, Man., J. E. Bamberger, Pur. Agt., Salt Lake City, Utah.
Savannah, Florida & Western	545	63	1,094	R. G. Fleming, Supt., A. A. Avellhe, Pur. Agt., G. M. D. Riley, M. of Mach., Savannah, Ga.
Scioto Valley	131	19	556	J. Robinson, Rec., Columbus, O.; J. Cullinan, M.M., Portsmouth, O.
Seaboard & Roanoke	80	19	639	L. T. Myers, Supt., J. A. Walton, Pur. Agt., C. W. Walker, M.M., D. W. Ballentine, M. C. B., Portsmouth, Va.
Sharpsville	23	3	13	J. V. Patton, P. & Gen. Man., Pittsburgh, Pa.; Wm. Truby, Supt., Jas. Glass, M. of M., Wm. Lynch, M. C. B., Sharpsville, Pa.
Shelby Iron Co	18	6	50	H. R. Stoughton, Gen. Man., J. T. Bostock, Supt., John S. Chester, M.M., Shelby Iron Works, Ala.
Shenandoah Valley	240	41	949	D. W. Flickwir, Supt., Roanoke, Va.; W. C. De Armond, Pur. Agt., Philadelphia, Pa.; B. J. Sitton, M.M., Milnes, Va.
Shenango & Allegheny	74	9	201	J. T. Blair, Gen. Man. & Pur. Agt., Edw. Richardson, M. M. & C. B., Greenville, Pa.
Shepaug, Litchfield & North'n	33	3	28	Alex. McNeill, Supt. & Pur. Agt., C. W. Hollister, M.M., E. G. Clark, M. C. B., Litchfield, Ct.
Silver Lake	6	2	4	J. Lansing Moore, Gen. Supt., Buffalo, N. Y.; H. T. Gould, Asst. Supt., Perry, N. Y.
Sinaloa & Durango	39	2	40	G. R. Douglas, Gen. Supt., Culiacan, Sinaloa, Mex.; John Nelson, M.M., Culiacan, Mex.
Sinnemahoning Valley	19	5	112	J. H. Skelton, Supt., F. H. Goodyear, Supt. & Pur. Agt., Buffalo, N. Y.
Skaneateles	5	2	5	J. McNamara, Supt., M. Fennell, M.M., Skaneateles, N. Y.
Sioux City & Pacific	107	12	186	
Fremont, Elk. & Mo. Val.	1,155	90	2,483	W. F. Fitch, Gen. Man., W. C. Halsey, Gen. Supt., Missouri Valley, Ia.; R. W. Hamer, Pur. Agt., Chicago, Ill.; S. A. Teal, M.M., W. H. Ramseyer, M. C. B., Missouri Valley, Ia.
Somerset	25	4	31	W. M. Ayer, Supt. & Pur. Agt., S. P. Mosher, For. Car Rep., Oakland, Me.; C. Crowell, For. Lo. Rep's., North Anson, Me.
Sonora	262	17	345	J. F. Goddard, Gen. Man., Topeka, Kan.; H. T. Richards, Supt., Guaymas, Mex.; A. C. Armstrong, Pur. Agt., Topeka, Kan.
Sonoma Valley				H. C. Whiting, V. P. & Supt., San Francisco, Cal.; W. C. Corbaley, Asst. Supt., San Rafael, Cal.; Ed. Reynolds, M.M., Tiburon, Cal.
South Atlantic & Ohio	38	4	60	H. W. Bates, Gen. Man., John Jenkins, Supt. & P. A., Wm. Van Bramer, M. M. & C. B., Bristol, Tenn.

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South Carolina	246	44	847	John B. Peck, Gen. Man., H. L. White, Pur. Agt., P. J. Cochrane, Mast. of Mach., Geo. H. Gramling, M. C. B., Charleston, S. C.
South Florida	149	22	273	J. E. Ingraham, Gen. Man., B. R. Swoope, Pur. Agt., R. Derby, M.M., A. B. Allen, M. C. B., Sanford, Fla.
South Pacific Coast	113	22	516	L. Fillmore, Gen. Supt., San Francisco, Cal.; S. T. Gage, M. M. & C. B., Newark, Cal.
South-Western	5	1	2	M. Tabler, Supt. & Man., J. C. Hooe, Pur. Agt., Harrodsburg, Ky.
Southern Pacific Co.	4,781	665	14,884	A. N. Towne, Gen. Man. Pacific System, San Francisco, Cal; A. C. Hutchinson, Gen. Man. Atlantic System, New Orleans, La.; A. J. Stevens, Gen. M. M., Benj. Welch, M. C. B., Sacramento, Cal.
St. Augustine & Palatka	25	2	17	R. McLaughlin, Pres., Jacksonville, Fla.; W. J. Jarvis, Gen. Supt., W. H. Chambers, M.M., St. Augustine, Fla.
St. Croix & Penobscot	21	5	202	S. W. Haycock, Gen. Man. & Pur. Agt., Calais, Me.; G. H. Corsen, M.M., H. C. Tinker, M. C. B., Milltown, Me.
St. Johns	14½	2	9	R. McLaughlin, Pres., W. J. Jarvis, Gen. Supt., Jacksonville, Fla.
St. Joseph Valley	10	1	10	B. Helmick, Gen. Man. & P. A., Buchanan, Mich.
St. Joe	13	5	86	G. A. Pierce, Act. Supt., J. B. Wilde, Pur. Agt., Tho. Mead, M.M., Ed. Keys, M. C. B., Bonne Terre, Mo.
St. Joseph & Gr. Island	454	36	1,043	Wm. Lush, Act. Gen. Man., W. J. Tench, Pur. Agt., M. R. Kiley, M. M. & C. B., St. Joseph, Mo.
St. Joseph & St. Louis	72	6	100	W. P. Harris, Gen. Supt., M. R. Kiley, M.M., St. Joseph, Mo.
St. Louis, Alton & Terre Haute	137	19	800	G. W. Parker, Gen. Man., St. Louis, Mo.; W. S. Wilson, Supt., Belleville, Ill.; P. H. Murphy, M.M., E. St. Louis, Ill.
St. Louis, Arkansas & Texas	1,187	108	3,570	S. W. Fordyce, Pres., St. Louis, Mo.; W. P. Homan, Gen. Man., H. G. Fleming, Gen. Supt., Texarkana, Tex.; F. W. Schaurte, Pur. Agt., St. Louis, Mo.; L. Finlay, M.M., Tyler, Tex.
St. L. Bridge Co. and Tunnel	31	22	11	Wm. Taussig, Gen. Man., E. G. Thompson, Act. Supt., J. E. Williams, Jr., Pur. Agt., J. F. Sechler, M.M., St. Louis, Mo.
St. Louis, Des Moines & No'n.	43	3	101	L. M. Martin, Supt., J. F. Morse, M.M., Des Moines, Ia.
St. Louis, Kan. City & Col.	59	3	62	Geo. O. Manchester, Pres., Boston, Mass.; S. T. Emerson, Supt., Jno. Gallup, Jr., Pur. Agt., St. Louis, Mo.
St. Louis & Central Illinois	84	3	42	H. A. Fisher, Gen. Man. & P. A., St. Louis, Mo.
St. Louis & Chicago	102			D. L. Wing, Pres. & Gen. Man., L. S. Graves, Supt., Springfield, Ill.
St. Louis & Hannibal	85	8	127	E. C. Case, Man., Richard Whalen, M.M., Hannibal, Mo.
St. Louis, Kan. City & Col	60	3	62	S. T. Emerson, Supt., St. Louis, Mo.
St. Louis & San Francisco	1,454	149	5,434	Edw. F. Winslow, Pres., H. L. Morrill, Gen. Man., St. Louis, Mo.; D. H. Nichols, Gen. Supt., North Springfield, Mo.; F. P. Wherry, Pur. Agt., St. Louis, Mo.; M. Kearney, M. M. & C. B., North Springfield, Mo.
St. Louis Div.				A. Veech, Supt., St. Louis, Mo.
Fort Smith Div				W. A. Thoms, Supt., Fort Smith, Ark.
Wichita Div.				J. R. Wentworth, Supt., Neodesha, Kan.
Carthage Div.				E. F. Smith, Supt., Carl Junction, Mo.
Springfield Div.				F. E. Merrill, Supt., Springfield, Mo.
St. Martin's & Upham	30	2	8	A. E. Killam, Man., B. B. Brown, Pur. Agt., St. Martin's, N. B.
St. Paul, Minn. & Manitoba	2,690	243	7,809	A. Manvel, Gen. Man., H. C. Ives, Asst. Gen. Man., E. B. Wakeman, Gen. Supt., J. C. Morrison, Pur. Agt., W. T. Reed, M. M. & C. B., St. Paul, Minn.
Breck. Div.				J. A. Mayer, Supt., Minneapolis, Minn.
F. F. Div.				J. B. Rice, Supt., St. Paul, Minn.
Northern Div.				A. Guthrie, Supt., Barnesville, Minn.
Dakota Div.				C. H. Jenks, Supt., Larimore, Dak.
Montana Div.				H. C. Ives, Supt., Great Falls, Mont.
St. Paul & Duluth	247	66	2,495	W. H. Fisher, Pres. & Gen. Supt., J. G. Callahan, Pur. Agt., Chas. F. Ward, M. M. & M. C. B., St. Paul, Minn.
Stony Clove & Catskill Mount	14	2	18	Geo. Coykendall, Gen. Supt., Rondout, N. Y.
Stony Creek	10			Geo. B. Boggs, Supt., Norristown, Pa.
Sterling Mountain	8	2	145	E. B. Wilson, Supt., Jonathan Akers, M.M., J. Babcock, M. C. B., Sterlington, N. Y.
Syracuse, Ontario & N. Y.	43	8	92	Geo. H. Graves Supt. & P. Agt., A. P. Tyler, M. M. & M. C. B., Syracuse, N. Y.
Talladega & Coosa Val.	26	5	50	D. M. Rogers, Gen. Man., F. Northcutt, M.M., Renfroe, Ala.

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Tennessee & Ohio	16	2	6	H. M. Aiken, Gen. Man., Rogersville, Tenn.
Terre Haute & Indianapolis	422	105	4,631	Joseph Hill, Asst. Gen. Man., E. R. Darlow, Asst. Supt., St. Louis, Mo.; N. K. Elliott, Supt. Trans., C. R. Peddle, Pur. Agt., Geo. H. Prescott, S. M. P. & M., F. C. Cleaver, M.M., Terre Haute, Ind.; Chas. Butler, M.M., Effingham, Ill.; Clinton Idler, Foreman, Indianapolis, In.
Terre Haute & Peoria	176	12	611	D. H. Conklin, Gen. Man., Decatur, Ill.
Texas Trunk	54	3	30	G. V. Peak, Gen. Supt., Dallas, Tex.
Texas Western	52	2	91	Wm. Furguson, Supt., Houston, Tex.
Texas & Pacific	1,487	186	3,987	John A. Grant, Gen. Man. & Pur. Agt., Dallas, Tex.: Jacob Johann, Supt. M. P. & R. S., Marshall, Tex.
Eastern Div.				J. J. Kertin, Supt., Geo. D. Brooke, M.M., C. H. Mead, M. C. B., Marshall, Tex.; J. L. Griffin, Supt., Texarkana, Tex.
New Orleans Div.				J. G. Pearsall, Supt., Marshall, Tex.; J. W. Addis, M.M., Gouldsboro, La.
Rio Grande Div.				S. F. Judy, Supt., A. S. Douglas, M.M., Big Springs, Tex.
Texas & St. Louis				*(See St. Louis, Arkansas & Texas.)*
Tionesta Valley	37	3	111	Jerry Crary, Supt., Sheffield, Pa.
Toledo, Ann. Ar. & No. Mich.	243	32	650	H. W. Ashley, Gen. Man. & Pur. Agt., Alex. Galloway, M.M., R. McPherson, Gen. For. C. D., Toledo, O.
Toledo, Columbus & Southern	45	5	110	J. M. Ferris, Rec., T. P. Brown, Gen. Man. & Pur. Agt., W. W. Harring, M. M. & C. B., Toledo, O.
Toledo, Saginaw & Muskegon	96	6	185	W. V. McCracken, Gen. Man., H. M. McCracken, Pur. Agt., F. J. Ferry, M.M., Muskegon, Mich.
Toledo, St. Louis & Kan. City	451	101	3,500	S. R. Callaway, Pres., New York, N. Y., C. N. Pratt, Pur. Agt., B. S. McLeod, Asst. Supt., Frankfort, Ind.; Thos. Robertson, M.M. & C. B., Delphos, O.
Toledo, Peoria & Western	248	46	700	E. N. Armstrong, Supt., B. Warren, M.M., Peoria, Ill.
Toledo & Ohio Central	212	46	4,760	J. M. Ferris, Gen. Man., Toledo, O.; T. M. Peelar, Supt., J. B. Morgan, M.M., Bucyrus, O.
Troy & Boston	53	21	484	D. Robinson, Pres., Joseph Crandell, Supt., C. H. Hubbell, Pur. Agt, Z. B. Davis, M.M., A. Brewer, M.C.B., Troy, N. Y.
Tuckerton	31	3	29	J. J. Pharo, Supt. & Pur. Agt., Tuckerton, N. J.
Ulster & Delaware	78	15	293	Jas. H. Jones, Supt. & P. A., A. E. Benson, M.M., John H. Decker, M. C. B., Rondout, N. Y.
Union Pacific (6 Gen. Divs.)	4,746	656	14,362	T. J. Potter, 1st Vice-Pres., E. Dickenson, Gen. Supt., J. J. Burns, Supply Agt., Clem Hackney, Supt. of Mach., John Wilson, Asst. Supt. of Mach., Omaha, Neb.
Nebraska Div.				R. Blickensderfer, Supt., W. A. Duell, Asst. Supt., J. P. Hovey, M.M., A. M. Collet, M. C. B., Omaha, Neb.
Wyoming Div				C. E. Wurtele, Supt., Cheyenne, W. T.; T. A. Davies, M.M., Laramie, W. T.
Salt Lake & Western Div.				W. W. Riter, Supt., Salt Lake City, Utah.
Colorado Div.				J. K. Choate, Supt., P. Touhy, Asst. Supt., M. F. Egan, M.M., Denver, Col.
Idaho Div.				C. F. Ressegnie, Supt., John S. Hickey, M.M., Pocatello, Idaho.
Kansas Div.				J. O. Brinkerhoff, Supt., W. Y. Carlton, Asst. Supt., Kansas City, Mo.; A. T. Palmer, Asst. Supt., Wallace, Kan., F. Mertzheimer, M.M., T. B. Roberts, M. C. B., Armstrong, Kan.
U. S. Rolling Stock Co.		18	4,606	A. Hegewisch, Pres., New York, N. Y.; W. H. Chaddock, Gen. Agt., Chicago, Ill.
Union Tank Line				M. A. Robinson, Gen. Man., C. A. Smith, Supt. Con. & Rep., New York, N. Y.
Utah Central	280	21	419	John Sharp, Gen. Supt., S. H. Hill, Pur. Agt, Geo. G. Bywater, M.M., Peter Reid, M.C.B., Salt Lake City, Utah.
Utah & Nevada	37	3	33	W. W. Riter, Supt., Salt Lake City, Utah.
Vaca Vall. & Clear Lake	30	1	17	A. M. Stevenson, Gen. Supt., A. V. Stevenson, Pur. Agt., Vacaville, Cal.
Valley (Ohio)	75	21	889	Wm. Thornburg, Gen. Man., Wm. M. Smith, Supt., M. H. Farasey, Pur. Agt., C. T. Johns, M. M. & M. C. B., Cleveland, O.
Virginia & Truckee	52	14	324	D. O. Mills, Pres., New York, N. Y.; H. M. Yerington, V.P. & G.S., Hume Yerington, Pur. Agt., I N. Fording, M. M., M. M. Hyde, M. C. B., Carson City, Nev.
Wabash	956			K. H. Wade, Gen. Supt., Chicago, Ill.; G. W. Stevens, Asst. Gen. Supt., Decatur, Ill.; R. J. Rees, Pur. Agt., Chicago, Ill.; J. B. Barnes, Supt. M. P. & M., Springfield, Ill.; M. M. Martin, Supt., Con. Dept., Decatur, Ill.

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Wabash Western	1,024	131	6,303	O. D. Ashley, Pres., New York, N. Y.; Charles M. Hays, Gen. Man., H. H. Wellman, Pur. Agt., St. Louis, Mo.; A. W. Quackenbush, M.M., Moberly, Mo.; F. W. Morse, M.M., Des Moines, Ia.
Western Div				H. L. Magee, Supt., Kansas City, Mo.
Eastern Div				J. S. Goodrich, Supt., Chicago, Ill.
Wabash, Chester & Western	43	3	69	C. B. Cole, Gen. Man., J. L. Hinkley, Supt. & P. A., Chester, Ill.
Wagner Palace Car Co				W. S. Webb, Pres., C. D. Flagg, Gen. Supt., C. E. Taylor, Pur. Agt., New York, N. Y.; T. A. Bissell, Man. Buffalo Works, Buffalo, N. Y.; J. C. Yager, Supt. E. Div., New York, N. Y.; J. A. Spoor, Supt. W. Div., Chicago, Ill.
Walden's Ridge	23	3	37	C. H. Hudson, Gen. Supt., Knoxville, Tenn.
Wallkill Valley	33	3	20	J. D. Layng, Gen. Man., New York, N. Y.; C. W. Bradley, Gen. Supt., Weehawken, N. J.; W. H. Sanford, Pur. Agt., Kingston, N. Y.
Warren & Farnsworth	16	3	39	A. D. Wood, Gen. Man. & P. A., Warren, Pa.
Waynesburg & Washington	29	3	31	C. E. Bower, Supt., A. M. Kline, M.M., Waynesburg, Pa.
West Feliciana	25	2	10	Jas. M. Edwards, Pres., Memphis, Tenn.; A. W. Robinson, Supt., J. A. Tilton, M. M. & C. B., Woodville, Miss.
West Virginia Central	85	8	390	T. B. Davis, Gen. Man., Geo. W. Harrison, Supt. & P. A., E. W. Lippencott, S. M. P., Piedmont, W. Va.
West Shore (N.Y.C. & H. R. Lessee.)	448	194	7,662	J. D. Layng, Gen. Man., New York, N. Y.; C. W. Bradley, Gen. Supt., Weehawken, N. J.; Chas. Reed, Pur. Agt., Wm. Buchanan, Supt. M. P., New York, N. Y.; Jas. M. Boon, Asst. S. M. P., Frankfort, N. Y.
H. R. River Div				J. P. Bradfield, Supt., Kingston, N. Y.; Thos. Aldcorn, M.M., New Durham, N. J.
Buffalo Div				D. B. M. Coy, Supt., Newark, N.Y.; Jas. Macbeth, M.M., East Buffalo, N. Y.
Western New York & Penn	639	120	6,279	Geo. S. Gatchell, Gen. Supt., W. W. Halsey, Asst. to Gen. Supt., Allen Vail, Gen. M.M., Buffalo, N. Y.
Buffalo Div				Henry Dwyer, Supt., Buffalo, N. Y.
Rochester Div				J. W. Watson, Supt., Olean, N. Y.
Pittsburgh Div				J. T. Gardner, Supt., W. J. Davis, M.M., Oil City, Pa.; C. E. Turner, M.M., Olean, N.Y.
Western (of Ala.)	138	17	250	
Atlanta & W. Point	87	15	224	Cecil Gabbett, Pres. & G. M., J. E. Worswick, M.M., Wm. Apps, M.C.B., Montgomery, Ala.
Western Counties	67	4	83	J. Brignell, Supt. & Pass. Agt., Yarmouth, N. S.
West. Md., Balt. & Harrisb'g, Han. Junc., Han. & Gettysburg; Bach. Val., and Balt. & Han.	215	36	747	J. M. Hood, Pres. & Gen. Man., R. J. Adair, Pur Agt., Baltimore, Md.; David Holtz, Mas. of Mach., J. H. Nussear, M.C.B., Union Bridge, Md.
Western & Atlantic	138	55	1,340	R. A. Anderson, Gen. Supt., A. B. Bostwick, Asst. Supt., Lamar, Collier, M.M., Wm. Kinyon, M.C.B., Atlanta, Ga.
Wheeling & L. E.	188	35	2,949	M. D. Woodford, Gen. Man., W. R. Woodford, Asst. Gen. Man., Toledo, O.; O. P. Dunbar, Gen. M. M., Norwalk, O.
White Water				W. W. Worthington, G. S. & P. A., T. H. Haberkorn, M. M. & C. B., Ft. Wayne, Ind.
Wichita & West'n and Kingman, Pratt & Western	126	8	15	Frank M. Hill, Supt., E. J. Bannin, M.M., Wichita, Kan.
Wicomico & Pocomoke	30	2	38	L. Showell, Pres., Berlin, Md.
Williamsport & North Br.	27	4	15	B. G. Welch, M. & Pur. Agt., Geo. Woodley, M.M., Hughesville, Pa.
Williamstown & Del. River	17	4	13	A. A. McLeod, Gen. Man., Philadelphia, Pa.; Sam'l Garwood, Supt., Williamstown, N. J.; H. C. Norton, Pur. Agt., Philadelphia, Pa.
Wilmington & Northern	90	23	201	Col. H. A. Du Pont, Gen. Man., A. G. McCausland, Pur. Agt., George Rommel, M.M., Alex. Maitland, M.C.B., Wilmington, Del.
Wilmington & Weldon; Northeastern; Central of S. C.; Cheraw & Darlington; Cheraw & Salisbury; and Wil., Columbia & Augusta, Midland N. C., Albemarle & Raleigh; Florence; and Manchester & Augusta	798	96	1,557	H. Walters, Gen. Man., J. F. Divine, Gen. Supt., John Bissett, M.M., Wilmington, N. C.; W. H. Day, M.C.B., Florence, S. C.; J. H. Davis, M. C. B. (W. & W.), Wilmington, N. C.
Winifrede	6	3	148	Theodore Wright, Pres., Philadelphia, Pa.; R. B. Cassady, Supt., T. O. M. Davis, Pur. Agt., Winifrede, W. Va.

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NAME OF RAILROAD.	LENGTH MILES.	NO. LOCOMOTIVES.	NO. CARS.	NAMES AND ADDRESSES.
Windsor & Annapolis	130	10	190	P. Innes, Gen. Man., Wm. Yould, M.M., Wm. Grierson, M. C. B., Kentville, N. S.
Wisconsin Central	778	132	3,976	W. S. Mellen, Gen. Man., A. A. Allen, Gen. Supt., C. C. McLeod, Pur. Agt., Milwaukee, Wis.; John Player, Supt. M. P., Waukesha, Wis.; Wm. Cormack, M. C. B., Stevens Point, Wis.
Chi., Mil. & Eastern Divs.				W. A. Gardner, Supt., Waukesha, Wis.
Wis. & Minn. and Minn. St. C. & Wis.				Thos. Clifford, Act. Supt., Stevens Point, Wis.
So., No. & Mid. Div.				C. F. Waldo, Supt., Stevens Point, Wis.
Woodruff Sleeping & Parlor Coach Co.				D. C. Corbin, Pres., New York, N. Y.; William G. Johnston, V. Pres., Philadelphia, Pa.; J. C. Paul, Gen. Man., New York, N. Y.
Worcester & Shrewsbury	2	3	9	I. E. Bigelow, Supt. & P. Agt., Charles Cleveland, M. M., Worcester, Mass.
York & Peach Bottom	40	5	100	S. M. Manifold, Supt. & Pur. Agt., G. M. Jacobs, M.M., Samuel Rupp, M. C. B., York, Pa.

ADDENDA.

Montgomery & Florida	35	4	54	S. D. Hubbard, Jr., Gen. Man., B. Dunham, G. S., Montgomery, Ala.
Northern & Northwestern	489	50	1,195	Jas. Webster, Supt., W. C. Scriber, P. A., P. Clark, M.M., Toronto, Can.
Oxford & Henderson	13	2	11	James A. White, Gen. Supt., Henderson, N. C.; C. P. Powell, P. A., James E. Lawrence, Oxford, N. C.
Pennsylvania Coal Co.'s R. R.	67	23	3,271	J. B. Smith, Gen. Supt., A. N. D. Crane, M.M., Geo. W. Simpson, M. C. B., Dunmore, Pa.
Saginaw Valley & St. Louis	39	4	64	J. B. Mulukin, Gen. Man., Detroit, Mich.; T. M. Fish, Gen. Supt., Ionia, Mich.; N. W. Merrill, Div. Supt., Saginaw, Mich.; Allen Bowen, P. A., Detroit, Mich.; Geo. C. Watrous, S. M. P. & R. S., Ionia, Mich.

PRIVATE LINES AND COMPANIES.

ALLEN PAPER CAR WHEEL CO., Chicago, Ill.

American Cotton Oil Co., P. N. Fox, Supt., 17 Wabash Ave., Chicago, Ill.
American Refrigerator Transit Co., 100 North 3d Street, St. Louis, Mo.
Anglo-American Provision Co., Chicago Board of Trade Building, Chicago, Ill.
Austell Refrigerator Car Line, E. C. Spaulding, Gen. Man., Atlanta, Ga.
Arms Palace Horse Car Co., W. A. Yager, Sec'ty, Toledo, O.
Armstrong, Frank, Pittsburgh, Pa.
Atlanta Stone, Coal & Lumber Line, E. C. Spaulding, Gen. Man., Atlanta, Ga.

BONSFIELD & CO., Bay City, Mich.

Brill Co., J. G., Philadelphia, Pa.
Britton, D. W., Green Bay, Wis.
Brown, Bonnell & Co., H. C. Johnson, Gen. Man., Pittsburgh, Pa.
Bush & Patterson, D. W. Mooar, Man., Grand Rapids, Mich.

CASE, J. I., Threshing Machine Co., W. L. Stone, Man., Milwaukee, Wis.
Chartiers Block Coal Co., R. T. Hill, Sec'y., Pittsburgh, Pa.
Chartiers Valley Coal Co., 36 Sixth St., Pittsburgh, Pa.
Chicago Refrigerator Car Co., R. A. Bunker, Sec'ty, La Fayette, Ind.
Chicago, Wilmington & Vermillion Coal Co., S. W. Pond, Man., Columbus, O.
Childs, H. B. & Co., D. W. Mooar, Man., Grand Rapids, Mich.
Consolidated Coal Co., 224 South 3d Philadelphia, Pa.
Buggy Co., Columbus, O.
Hocking Coal & Iron Co., A. C. Ady, Columbus, O.
Columbus (The) Meat & Ice Co., Columbus, Tex.
Crocker Chair Co., F. M. Luce, Man., Chicago, Ill.
Cummer Lumber Co., D. W. Mooar, Man., Grand Rapids, Mich.
Cummer & Son, J., D. W. Mooar, Man., Grand Rapids, Mich.
Cutting Car Co., Winchester, Mass.

DETROIT REFRIGERATOR CAR CO., C. H. Hutchins, Sec't'y., Detroit, Mich.
Dewing & Son, D. W. Mooar, Man., Grand Rapids, Mich.

EAGLE CONSOLIDATED REFINING CO., John W. Forbes, Man., Lima, O.
East St. Louis Dressed Beef Co., National Stock Yards, Clair Co., Ill.
Ellsworth & Co., J. W., 138 Jackson St., Chicago, Ill.
Empire Oil Works, Reno, Pa.

FAIRBANK & CO., N. K., 59 Wabash Ave., Chicago, Ill.
Frazer Lubricator Co., B. F. Ray, Pres't., Chicago, Ill.
Frick Coke Co., H. C., Pittsburgh, Pa.

GRASSELLI CHEMICAL WORKS, Cleveland, Ohio.
Grossman Palace Horse Car Co., Lancaster, Pa.

HALL, GEO. H. & CO., FREIGHT CAR LINE, Louisville, Ky
Hallowell Granite Works, Hallowell, Me.
Harrison Wagon Co., D. W. Mooar, Man., Grand Rapids, Mich.
Hayden P., A. C. Ady, Man., Columbus, O.
Haynes & Son, James, D. W. Mooar, Man., Grand Rapids, Mich.
Heinz, F. & J., 195 First Ave., Pittsburgh, Pa.
Hodgman, G. B. (The) Manufacturing Co., Sandusky, O.

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INTERNATIONAL OIL WORKS, Titusville, Pa.

Inter-State Transit Co., R. C. Hannah, Sec'ty, Chicago, Ill.

JOLIET STEEL CO., W. R. Sterling, Treas., Chicago, Ill.

KANSAS CITY DRESSED BEEF LINE, Kansas City, Mo.
Kansas City (The) Refrigerator Car Co., George Fowler, Treas., Kansas City, Mo.
Kansas City (The) Woodenware Co., S. W. Day, Pres't., Armourdale, Kan.
Kilbourn & Co., Silas H., Grand Haven, Mich.

LEASDALE COAL CO., Pittsburgh, Pa.

Liquid Freight Line, 205 La Salle St., Chicago, Ill.
Lovell, W. A. (M. M. W. Line), Boston, Mass.

MATHER HORSE & STOCK CAR CO., 122 Market St., Chicago, Ill.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
Mattoon Manufacturing Co., Sheboygan, Wis.
Menasha Chair Co., Milwaukee, Wis.
Menasha Wooden Ware Co., F. M. Luce, Man., Chicago, Ill.
Mitchell Bros., Cadillac, Mich.
Mitchell, Lewis & Co, W. L. Stone, Man., Milwaukee, Wis.
Morris, Edward, Union Stock Yards, Chicago, Ill.
Morris & Co., Nelson, Union Stock Yards, Chicago, Ill.
Murray & Co., M., Indianapolis, Ind.
Mutual Oil Co., Oil City, Pa.

NASON, C. F., D. W. Mooar, Man., Grand Rapids, Mich.
National Linseed Oil Co., Adams Express Building, Chicago, Ill.
National Oil Co., Limited, Titusville, Pa.
N. Y., L. E. & W. Ry., Special Live Stock Line, C. W. Cushman, Man., Buffalo, N. Y.
Northwestern Manufacturing Car Co., Geo. A. Staehle, Man., St. Paul, Minn.

OHIO COAL EXCHANGE, A. C. Ady, Man., Columbus, O.
Ohio & Western Coal & Iron Co., H. C. Stanwood, Asst. Treas., Columbus, O.
Osterhout & Fox Lumber Co., D. W. Mooar, Man., Grand Rapids, Mich.
Otis & Co., John, D. W. Mooar, Man., Grand Rapids, Mich.

PACIFIC COAST OIL CO., E. Wheaton, Sec'ty, 123 California St., San Francisco, Cal.
Parker, D. W., Kalamazoo, Mich.
Penn Gas Coal Co., 209 South 3d St., Philadelphia, Pa.
Penn Refining Co., Limited, Oil City, Pa.
Pennsylvania Oil Co., 182 Front St., New York.
Pfeiffer Stone Co., St. Joseph, Mo.
Portage Straw Board Co., New Portage, O.
Powel's Sons & Co., R. H., 419 Walnut St., Philadelphia, Pa.
Powel & Co., R. H., 417 Walnut St., Philadelphia, Pa.
Procter & Gamble, Cincinnati, O.

RACINE WAGON & CARRIAGE CO., Racine, Wis.

ST. LOUIS REFRIGERATOR CAR CO., 204 North 3d Street, St. Louis, Mo.
Samuel Cupples Woodenware Co., Grand Rapids, Mich., and St. Louis, Mo.
Schoonmaker Coke Co., J. M., 120 Water St., Pittsburgh, Pa.
Scofield, Shurmer & Teagle, Cleveland, O.
Sharer, Geo. W., D. W. Mooar, Man., Grand Rapids, Mich.
Sheboygan Manufacturing Co., F. M. Luce, Man., Chicago, Ill.
Shelby Iron Co., E. L. Hill, Man., Louisville, Ky.
Solvay Process Co., (The) W. B. Cogswell, Man., Syracuse, N. Y.
Somers Coal Co., A. Brenholts, Sec'ty, Columbus, O.
Southern Cotton Oil Co. (The), Girard Bank Building, Philadelphia, Pa.
Syme & Jones, F. M. Luce, Man., Chicago, Ill.
S. & I. S. E. Ry. (Continental Line), F. W. Tracy, Sec'ty, Springfield, Ill.

TRANS-CONTINENTAL TRANSPORTATION CO., Chicago, Ill.

UNION ACID CO., Cleveland, O.

Union Steel Co. (The), Robt. Spencer, Agent, 303 First National Bank Building, Chicago, Ill.

WATERS-PIERCE OIL CO. TANK LINE, C. M. Adams, Sec'ty, St. Louis, Mo.
Weaver, Tod & Co., 219 Dearborn St., Chicago, Ill.
Western Rolling Stock Co., G. B. Sherman, Man., Buffalo, N. Y.
West Michigan Equipment Co. and Lumber Line, Muskegon, Mich.
Windisch-Muhlhauser Brewing Co., Cincinnati, Ohio.

YOUGHIOGHENY GAS & STEAM COALS CO., B. F. Rafferty & Co., Pittsburgh, Pa.

SPECIAL FREIGHT CAR LINES.

ARMOUR REFRIGERATOR LINE, 205 La Salle St., Chicago, Ill.

BURTON STOCK CAR CO. (The), Wichita, Kan.

CANADA SOUTHERN LINE, B. B. Mitchell, Gen. Man., Rochester, N. Y.
Canadian Pacific Despatch, B. D. Webber, Agt., Boston, Mass.
Commercial Express Line, J. A. Moore, Gen. Man., Buffalo, N. Y.

EASTMAN FREIGHT CAR HEATER CO., 30 State St., Boston, Mass.
Empire Line, Geo. M. Ball, Man., Philadelphia, Pa.
Erie Dispatch, Geo. W. Ristine, Gen. Man., 205 La Salle St., Chicago, Ill.

GREAT CENTRAL ROUTE, BLUE LINE, B. B. Mitchell, Gen. Man., Rochester, N. Y.

JACOB DOLD & SON'S DRESSED BEEF LINE, Kansas City, Mo.

LACKAWANNA LINE, FAST FREIGHT, W. H. Smith, Gen. Man., Chapin Block, Buffalo, N. Y.

MERCHANTS' DESPATCH TRANSPORTATION CO., J. C. Noyes, Gen. Man., 335 Broadway, N. Y.
Midland Line, G. B. Sherman, Gen. Man., 298 Main St., Buffalo, N. Y.

NATIONAL DESPATCH LINE, John Porteous, 260 Washington St., Boston, Mass.
Nickel Plate Line, Chas. S. Tappen, Gen. Man., Rochester, N. Y.

RED LINE TRANSIT CO. (The), G. B. Sherman, Gen. Man., 291 Main St., Buffalo, N. Y.
Rend & Co., W. P., 152 Madison St., Chicago, Ill.

STANDARD OIL CO., Union Tank Line, 26 Broadway, N. Y.
Street's Stable Car Line, J. W. Street, Gen. Man., 196 La Salle St., Chicago, Ill.
Swift Refrigerator Line, 74 Exchange Building, Chicago, Ill.

TIFFANY REFRIGERATOR CAR CO., Chas. F. Pierce, Gen. Man., 205 La Salle St., Chicago, Ill.
Traders' Despatch, T. N. Jarvis, Gen. Man., Buffalo, N. Y.

UNION LINE (Pennsylvania R. R. Co.), Philadelphia, Pa.

WEST SHORE AND HOOSAC TUNNEL LINES, J. A. Grier, Gen. Man., 126 Washington St., Chicago, Ill.
White Line Central Transit Co., G. B. Sherman, Gen. Man., 298 Main St., Buffalo, N. Y.

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RAILS, SPLICES AND BOLTS REQUIRED FOR ONE MILE OF TRACK.

Tons of Rails.

Rule.—To find the No. of Tons (of 2,240 lbs.) of Rail to the mile, divide the weight per yard by 7 and multiply it by 11, thus: for 56 lb. rail divide 56 by 7, equal 8, multiplied by 11, equal 88 tons, for one mile of single track.

Weight of Rail per Yard.	Tons per Mile.	Weight of Rail per Yard.	Tons per Mile.
12 pounds.	12 Tons 920 Pounds.	45 pounds.	70 Tons 1,600 Pounds.
14 "	22 "	48 "	75 " 960 "
16 "	25 " 320 "	50 "	78 " 1,280 "
18 "	28 " 640 "	52 "	81 " 1,600 "
20 "	31 " 960 "	56 "	88 "
22 "	34 " 1,280 "	57 "	89 " 1,280 "
25 "	39 " 640 "	60 "	94 " 640 "
26 "	40 " 1,920 "	62 "	97 " 960 "
27 "	42 " 960 "	64 "	100 " 1,280 "
28 "	44 "	65 "	102 " 320 "
30 "	47 " 320 "	68 "	106 " 1,920 "
33 "	51 " 1,920 "	70 "	110 "
35 "	55 "	72 "	113 " 320 "
40 "	62 " 1,920 "	76 "	119 " 960 "

NUMBER OF RAILS, CHAIRS, JOINTS, SPLICES AND BOLTS, For Each Mile of Track.

Length of Rail.	No. of Rails, Chairs, or Joints.	No. of Splices.	No. of Bolts.
18	584	1,168	2,336
20	528	1,056	2,112
21	503	1,006	2,012
22	480	960	1,920
24	440	880	1,760
25	422	844	1,688
26	406	812	1,624
27	391	782	1,564
28	377	754	1,508
30	352	704	1,408

NUMBER OF CROSS TIES FOR EACH MILE OF TRACK.

Centre to Centre.	No. of Ties.	Centre to Centre.	No. of Ties.
1½ feet.	2,520	2½ feet.	2,113
1¾ "	3,017	2¾ "	1,921
2 "	2,640	3 "	1,761
2¼ "	2,348		

ACRES REQUIRED FOR DIFFERENT WIDTHS OF ROADWAY.

Width of Road in Feet.	Acres per Mile.	Acres per 100 Feet.	Width of Road in Feet.	Acres per Mile.	Acres per 100 Feet.
1	.121	.002	48	5.82	.11
2	.242	.005	49½	6.	.114
3	.364	.007	50	6.06	.115
4	.485	.009	52	6.3	.119
5	.606	.011	54	6.55	.124
6	.727	.014	56	6.79	.129
7	.848	.016	57¾	7.	.133
8	.970	.018	58	7.03	.133
¼	1.	.019	60	7.27	.138
9	1.09	.021	62	7.52	.143
10	1.21	.023	64	7.76	.147
12	1.46	.028	66	8	.151
14	1.70	.032	68	.24	.156
16	1.94	.037	70	8.48	.161
½	2.	.038	72	8.73	.165
18	2.18	.041	74	8.97	.17
20	2.42	.046	¼	9.	.17
22	2.67	.051	76	9.21	.174
24	2.91	.055	78	9.45	.179
¾	3.	.057	80	9.7	.184
26	3.15	.06	82	9.94	.188
28	3.39	.064	½	10.	.189
30	3.64	.069	84	10.2	.193
32	3.88	.073	86	10.4	.197
34	4.12	.078	88	10.7	.202
36	4.36	.083	90	10.9	.207
38	4.61	.087	¾	11.	.209
40	4.85	.092	92	11.2	.211
41¼	5.	.094	94	11.4	.216
42	5.09	.096	96	11.6	.22
44	5.33	.101	98	11.9	.225
46	5.58	.106	100	12.1	.23

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STANDARD SIZES OF NUTS.

SQUARE NUTS.				HEXAGON NUTS.			
Width.	Thickness.	Hole.	Size of Bolt	Width.	Thickness.	Hole.	Size of Bolt
11-32	5-32	3-32	1/8	1/2	1/4	7-32	1/4
13-32	3-16	5-32	3-16	9/16	5-16	9-32	5-16
1/2	1/4	7-32	1/4	5/8	3/8	11-32	3/8
9/16	5-16	9-32	5-16	3/4	7/16	7-16	7/16
5/8	3/8	11-32	3/8	7/8	1/2	7-16	1/2
3/4	7-16	13-32	7-16	1	1/2	7-16	1/2
7/8	1/2	7-16	1/2	1 1/8	5/8	9-16	5/8
1	1/2	7-16	1/2	1 1/4	5/8	9-16	5/8
1 1/8	1/2	1/2	9-16	1 1/4	3/4	9-16	5/8
1 1/8	5/8	9-16	5/8	1 3/8	3/4	21-32	3/4
1 1/4	5/8	9-16	5/8	1 1/2	7/8	21-32	3/4
1 3/8	3/4	21-32	3/4	1 5/8	7/8	25 32	7/8
1 1/2	3/4	21-32	3/4	1 5/8	1	25-32	7/8
1 5/8	7/8	25-32	7/8	1 3/4	1	7/8	1
1 3/4	7/8	25-32	7/8	1 3/4	1 1/8	7/8	1
1 3/4	1	7/8	1	2	1 1/4	15-16	1 1/8
2	1	7/8	1	2 1/4	1 3/8	1 1-16	1 1/4
2	1 1/8	15-16	1 1/8	2 1/2	1 1/2	1 3-16	1 3/8
2 1/4	1 1/8	15-16	1 1/8	2 3/4	1 5/8	1 5-16	1 1/2
2 1/4	1 3/8	1 1-16	1 1/4	3	1 3/4	1 7-16	1 5/8
2 1/2	1 1/4	1 1-16	1 1/4	3 1/4	1 7/8	1 9-16	1 3/4
2 3/4	1 3/8	1 3-16	1 3/8	3 1/2	2	1 11-16	1 7/8
3	1 1/2	1 5-16	1 1/2		2	1 13-16	2
3 1/4	1 5/8	1 7-16	1 5/8				
3 1/2	1 3/4	1 9-16	1 3/4				
3 3/4	1 7/8	1 11-16	1 7/8				
4	2	1 13-16	2				

RAILROAD SPIKES.

SIZE.		No. In. 100 lbs.	SIZE.		No. In. 100 lbs.
Length, Inches	Thick, Inch.		Length, Inches	Thick, Inch.	
4 1/2	7-16	351	5 1/2	1/2	237
4 1/2	1/2	267	5 1/2	9-16	193
5	5/8	473	5 1/2	5/8	146
5	7-16	326	6	1/2	207
5	1/2	260	6	9-16	175
5	9-16	197	6	5/8	131
5	5/8	173			

BOLTS WITH SQUARE HEADS AND NUTS.

Weight of 100, *in Pounds.*

Length, Inches.	Thickness of Bolt in Inches.							
	1/4	5-16	3/8	7-16	1/2	5/8	3/4	7/8
1 1/2	4.16	7.59	10.62	15.94	23.87	39.31		
1 3/4	4.22	7.87	11.72	16.90	25.06	41.38		
2	4.75	8.56	12.88	18.25	26.44	45.69	73.62	
2 1/4	5.34	9.12	12.90	19.38	28.02	49.50	76.	
2 1/2	5.97	9.59	14.69	20.69	29.50	51.25	79.75	
2 3/4	6.50	10.44	16.47	21.50	31.16	53.	83.	
3		10.78	17.87	22.38	32.44	56.	85.38	127.25
3 1/2		11.81	18.94	26.19	39.75	63.12	98.44	140.56
4			20.59	28.87	42.50	74.87	108.12	148.37
4 1/2			21.69	29.87	44.87	79.62	113.12	158.76
5			23.62	32.31	48.81	83.	122.	167.25
5 1/2			25.81	34.44	51.38	87.88	128 62	174.88
6			16.87	36.62	53.31	92.38	131.75	204.25
6 1/2					56.87	96.88	139.56	214.69
7					59.12	99.87	145.50	228.44
7 1/2					61.87	105.75	150.88	235.31
8					64.44	109.50	157.12	239.88
9					70.50	118.12	169.62	258.12
10					77.	128.13	184.	276.18
11					82.88	136.19	195.13	295.69
12					86.37	144.87	209.75	311.94
13					92.	155.50	219.37	335.81
14					97.75	163.58	237.50	351.88
15					103.25	170.75	249.05	391.75

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PERCENTAGE OF SAVING OF FUEL BY HEATING FEED WATER.

(Steam at 60 lbs.)

Final Temperature.	INITIAL TEMPERATURE OF WATER.												
	32°	40°	50°	60°	70°	80°	90°	100°	120°	140°	160°	180°	200°
60°	2.39	1.71	0.86	0.									
80	4.09	3.43	2.59	1.74	0.88	0.							
100	5.79	5.14	4.32	3.49	2.64	1.77	0.90	0.					
120	7.50	6.85	6.05	5.23	4.40	3.55	2.68	1.80	0.				
140	9.20	8.57	7.77	6.97	6.15	5.32	4.47	3.61	1 84	0.			
160	10.90	10.28	9.50	8.72	7.91	7.09	6.26	5.42	3.67	1 87	0.		
180	12.60	12.00	11.23	10.46	9.68	8.87	8.06	7.23	5 52	3.75	1.91		
200	14 30	13.71	13.00	12.20	11.43	10.65	9.85	9 08	7.36	5.62	3.82	1 96	0.
220	16.00	15.42	14.70	14.00	13.19	12.33	11.64	10.84	9.90	7.50	5.73	3.93	1.98
240	17.79	17.13	16.42	15.69	14.96	14.20	13.43	12.65	11.05	9.37	7.64	5.90	3.97
260	19.40	18.85	18.15	17.44	16 71	15.97	15.22	14.45	11 88	11.24	9.56	7.86	5.96
280	21.10	20.56	19.87	19.18	18.47	17.75	17.01	16.26	14.72	13.02	11.46	9.73	7.94
300	22.88	23.27	21.61	20.92	20.23	19.52	18.81	18.07	16.49	14.99	13.37	11.70	9.93

SPEED TABLE FOR TRAINS.

Speed per hour.	Time of Performing.			Speed per hour.	Time of Performing.		
	¼ Mile.	½ Mile.	1 Mile.		¼ Mile.	½ Mile.	1 Mile.
Miles.	m. s.	m. s.	m. s.	Miles.	m. s.	m. s.	m. s.
5	3 0	6 0	12 0	33	0 27	0 54	1 49
6	2 30	5 0	10 0	34	0 26	0 53	1 46
7	2 8	4 17	8 34	35	0 25	0 51	1 43
8	1 52	3 45	7 30	36	0 25	0 50	1 40
9	1 40	3 20	6 40	37	0 24	0 48	1 37
10	1 30	3 0	6 0	38	0 23	0 47	1 34
11	1 21	2 43	5 27	39	0 23	0 46	1 32
12	1 15	2 30	5 0	40	0 22	0 45	1 30
13	1 9	2 18	4 37	41	0 21	0 43	1 27
14	1 4	2 8	4 17	42	0 21	0 42	1 25
15	1 0	2 0	4 0	43	0 20	0 41	1 23
16	0 56	1 52	3 35	44	0 20	0 40	1 21
17	0 53	1 46	3 41	45	0 20	0 40	1 20
18	0 50	1 40	3 20	46	0 19	0 39	1 18
19	0 47	1 34	3 9	47	0 19	0 38	1 16
20	0 45	1 30	3 0	48	0 18	0 37	1 15
21	0 42	1 25	2 51	49	0 18	0 36	1 13
22	0 40	1 21	2 43	50	0 18	0 36	1 12
23	0 39	1 18	2 36	51	0 17	0 35	1 10
24	0 37	1 15	2 30	52	0 17	0 34	1 9
25	0 36	1 12	2 24	53	0 17	0 34	1 7
26	0 34	1 9	2 18	54	0 16	0 33	1 6
27	0 33	1 6	2 13	55	0 16	0 32	1 5
28	0 32	1 4	2 8	56	0 16	0 32	1 4
29	0 31	1 2	2 4	57	0 15	0 31	1 3
30	0 30	1 0	2 0	58	0 15	0 31	1 2
31	0 29	0 58	1 56	59	0 15	0 30	1 1
32	0 28	0 56	1 52	60	0 15	0 30	1 0

DRIVING WHEELS.

Number of Revolutions per Mile.

Diameter of Wheel.....	2 ft.	2½ ft.	3 ft.	3½ ft.	4 ft.	4½ ft.	5 ft.
Revolutions per Mile.....	840	672	560	480	420	373	336
Diameter of Wheel.....	5½ ft.	6 ft.	6½ ft.	7 ft.	8 ft.	9 ft.	10 ft.
Revolutions per Mile.....	305½	280	258½	240	210	187	168

SIZES OF TANKS AND CONTENTS.

Diameter.	Depth.	Gallons.	Diameter.	Depth.	Gallons.
Ft.	Ft.		Ft.	Ft.	
12	8	6,767	22	12	40,607
14	9	10,363	30	13	51,696
16	9	13,535	26	14	64,451
18	10	19,034	82	15	79,310
20	10	23,490	48	16	96,268
22	11	31,277	34	17	115,451

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IRON TELEGRAPH WIRE.

TABLE OF LENGTH, SIZE, WEIGHT, STRENGTH, ETC.

Birmingham Wire Gauge.	Diameter in Inches.	Weight per 100 Feet.	Weight 1 Mile, Galvanized.	Weight 1 Mile, not Galvanized.	Breaking Strain.	Length of Bundles in Feet.
0	0.340	29.44	1490	1416	7280	213
1	0.300	22.92	1210	1150	5650	273
2	0.280	19.97	1054	1002	4930	315
3	0.260	17.22	909	854	4250	363
4	0.240	11.00	775	747	3620	429
5	0.220	12.34	651	619	3040	510
6	0.200	10.19	538	512	2510	609
7	0.185	8.72	461	438	2220	717
8*	0.170	7.37	389	370	1840	858
9*	0.155	6.12	323	307	1560	1026
0*	0.140	4.99	264	251	1280	1260
11*	0.125	3.98	211	200	1000	1587
12	0.110	3.08	163	157	800	2100
13	0.095	2.35	124	118	568	2679
14	0.085	1.84	97	93	456	3426
15	0.075	1.43	76	73	352	4404
16	0.065	1.08	57	55	264	5862
17	0.057	0.83	44	42	208	7620
18	0.050	0.64	34	32	160	9450
19	0.045	0.52	27	26	128	12255
20	0.040	0.41	21	20	104	14736

* Those marked with star are standard sizes for telegraph use.

YARDS OF IRON WIRE TO BUNDLE.

Wire Gauge.	Yards in Bundle.	Wire Gauge.	Yards in Bundle.	Wire Gauge.	Yards in Bundle.
No. 0	71	No. 7	239	No. 14	1142
" 1	91	" 8	286	" 15	1468
" 2	105	" 9	342	" 16	1954
" 3	121	" 10	420	" 17	2540
" 4	143	" 11	529	" 18	3150
" 5	170	" 12	700	" 19	4085
" 6	203	" 13	893	" 20	4912

All Wires 63 lbs. per bundle.

ROOFING SLATE.

General Rule for the Computation of Slate.

From the length of the Slate take three inches, or as many as the third covers the first; divide the remainder by 2, and multiply the quotient by the width of the slate, and the product will be the number of square inches in a single slate. Divide the number of square inches thus procured by 144, the number of square inches in square foot, and the quotient will be the number of feet and inches required. A square of slate is what will cover 100 feet square, when properly laid upon the roof.

TABLE OF SIZES AND NUMBER OF SLATES IN ONE SQUARE.

Size in Inches.	No. of Slate in a Square.	Size in Inches.	No. of Slate in a Square.	Size in Inches.	No. of Slate in a Square.	Size in Inches.	No. of Slate in a Square.
6x12	533	9x14	291	10x18	192	11x22	137
7x12	457	10x14	261	11x18	174	12x22	126
8x12	400	12x14	218	12x18	160	14x22	108
9x12	355	8x16	277	14x18	137	12x24	114
10x12	320	9x16	246	10x20	169	14x24	98
12x12	266	10x16	221	11x20	154	16x24	86
7x14	374	12x16	184	12x20	141	14x26	89
8x14	327	9x18	213	14x20	121	16x26	78

The Weight of a Square of Slate is estimated in a general way (varying according to the thickness of the different makes), at from 600 to 700 lbs. per square.

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TABLE OF GRADIENTS AND RESISTANCE DUE TO GRAVITY PER TON, FOR EACH.

Vertical Rise.		Resistance per Ton.	Vertical Rise.		Resistance per Ton.
Ratio.	Per Mile.		Ratio.	Per Mile.	
one in	feet.	lbs.	one in	feet.	lbs.
100	52.8	22.4	60	88.	37.3
98	53.9	22.8	58	91.	38.6
96	55.	23 3	56	94.2	40.
94	56.1	23.8	54	97.7	41.4
92	57.5	24.3	52	101.5	43.
90	58.6	24.9	50	105.6	44.8
88	60.	25.4	48	110.	46.6
86	61.3	26.	46	115.	48.6
84	62.8	26.6	44	120.	50.9
82	64.3	27.3	42	125.7	53.3
80	66.	28.	40	132.	56.
78	67.6	28.7	38	138.9	58.9
76	69.4	29.4	36	146.6	62.2
74	71.3	32.2	34	155.3	65.8
72	73.3	31.1	32	165.	70.
70	75.4	32.	30	176	74.6
68	77.6	32.9	28	188.5	80.
66	80.	33.9	26	203.	86.1
64	82.5	35.	24	220.	93.3
62	85.1	36.1	22	240.	101.8

RESISTANCE OF TRAINS, ON A LEVEL, AT DIFFERENT SPEEDS, IN LBS., PER TON, OF LOAD

V = Velocity in miles per hour.
R = Resistance in lbs. per ton of train.

The resistance of curves may be reckoned as 1 per cent. for each degree of the curve occupied by the train

Imperfections of road vary from 5 to 40 per cent.

Strong side winds..... 20 "

Velocity of train in Miles per hour.....	10	15	20	30	40	50	60	70
Resistance on straight line in lbs. per ton..	8½	9¼	10¼	13¼	17¼	22½	29	36½
Do., with sharp curves and strong wind*..	13	14	15½	20	26	34	43½	55

*50 per cent. added to resistance on straight line.

ADHESIVE POWER OF LOCOMOTIVES.

Adhesion per Ton of Load on the Driving Wheels:

When the rails are very dry..... 600 lbs. per ton.
When the rails are very wet..... 550 " "
In misty weather if the rails are greasy..... 300 " "
In frosty or snowy weather..... 200 " "

In coupled engines the adhesive force is due to the load on all wheels coupled to the driving wheels.

The adhesive power must exceed the tractive force of an engine on the rails, otherwise the wheels will slip. For loads on driving wheels, see below.

DISTRIBUTION OF WEIGHT IN LOCOMOTIVES.

The average distribution of the weights of a six-wheeled locomotive on its wheels is:
Assuming the total weight of the engine in working order to be 1:

	Passenger Engines.		Freight Engines.
Load on leading wheels.....	.32		.34
" driving wheels.....	.48		.36
" trailing wheels.....	.20		.30
Total weight of engine.....	1.00		1.00

Passenger engines, narrow gauge, average.... from 20 to 30 tons.
Freight engines..... " 24 to 32 "
Broad-gauge engines, first class..... " 35 "
Incline engines..... " 40 to 47 "

TRACTIVE POWER OF LOCOMOTIVES.

Let D = Diameter of cylinder in inches.
" P = Mean pressure of steam in cylinders in lbs. per square inch.
" L = Length of stroke in inches.
" W = Diameter of driving wheel in inches.

Tractive force on rails in lbs. will equal $\frac{D^2PL}{W}$.

TO FIND THE LOAD WHICH AN ENGINE WILL TAKE ON A GIVEN INCLINE.

Let G = Resistance due to gravity on the steepest gradient in lbs. per ton. (See Index for "Gradients.")
" R = Resistance due to assumed velocity of train in lbs. per ton. (See Index for "Resistance of Trains.")
" T = Tractive power of engine in lbs., as found above.
" W = Weight of engine and tender in tons.

The load the engine can take in tons, including the weight of the wagons but not that of engine and tender, will equal $\frac{T}{G+R} = W$.

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CONTENTS OF CYLINDERS AND PIPES.

In Cubic Feet and Gallons.

Diameter in Ins.	FOR 1 FOOT IN LENGTH. Cubic Feet.	Gallons of 231 Cub. Ins.	Diameter in Ins.	FOR 1 FOOT IN LENGTH. Cubic Feet.	Gallons of 231 Cub. Ins.	Diameter in Ins.	FOR 1 FOOT IN LENGTH. Cubic Feet	Gallons of 231 Cub. Ins.
¼	.0003	.0025	4	.0873	.6528	10	.5454	4.08
5-16	.0005	.004	¼	.0985	.7369	¼	.573	4.286
⅜	.0008	.0057	½	.1104	.8263	½	.6013	4.498
7-16	.001	.0078	¾	.1231	.9206	¾	.6303	4.715
½	.0014	.0102	5	.1364	1.02	11	.66	4.937
9-16	.0017	.0129	¼	.1503	1.125	¼	.6903	5.164
⅝	.0021	.0159	½	.165	1.234	½	.7213	5 396
11-16	.0026	.0193	¾	.1803	1.349	¾	.753	5.633
¾	.0031	.0230	6	.1963	1.469	12	.7854	5.875
13-16	.0036	.0269	¼	.2131	1.594	½	.8522	6.375
⅞	.0042	.0312	½	.2304	1.724	13	.9218	6.895
15-16	.0048	.0359	¾	.2485	1.859	½	.994	7.436
1	.0055	.0408	7	.2673	1.999	14	1.069	7.997
¼	.0085	.0638	¼	.2867	2.145	½	1.147	8.578
½	.0123	.0918	½	.3068	2.295	15	1.227	9.180
¾	.0167	.1249	¾	.3276	2.45	½	1.31	9.801
2	.0218	.1632	8	.3491	2.611	16	1.396	10.44
¼	.0276	.2066	¼	.3712	2.777	½	1.485	11.11
½	.0341	.255	½	.3941	2.948	17	1.576	11.79
¾	.0412	.3085	¾	.4176	3.125	½	1.67	12.49
3	.0491	.3672	9	.4418	3.305	18	1.767	13.22
¼	.0576	.4309	¼	.4667	3.491	½	1.867	13.96
½	.0668	.4998	½	.4922	3.682	19	1.969	14.73
¾	.0767	.5738	¾	.5185	3.879	½	2.074	15.51
						20	2.182	16.32

To find the contents of a larger pipe than given above, take one-half the size and multiply by 4, or take one-fourth the size and multiply by 16. Thus: wanted, the contents of a pipe 30 inches in diameter; 9.180 (contents of 15 inch pipe) x 4 = 36.72 gallons. Wanted, contents of a pipe 50 inches in diameter; .8522 (contents of 12½ inch pipe) x 16 = 13,6352 cubic inches.

STANDARD SIZES, LENGTHS, &C., OF SEAMLESS DRAWN TUBING.

Inches Outside Diameter	Length Feet.	Brown & Sharpe's Gauge	Weights per Foot. Brass.	Copper.	Inches Outside Diameter	Length Feet.	Brown & Sharpe's Gauge.	Weights per Foot. Brass.	Copper.
⅝	12	16	⅜	⅜	1 5-16	12	11 & 10	2	2 1-10
¾	12	15	½	½	2	12	"	2 1-5	2¼
13-16	12	15	9-16	9-16	2⅛	10	"	2¼	2⅜
⅞	12	15	⅝	⅝	2¼	10	"	2⅜	2½
15-16	12	15	11-16	11-16	2⅜	10	"	2½	2⅝
1	12	14	¾	¾	2½	10	8 & 8½	2¾	3
1⅛	12	14	⅞	⅞	2⅝	10	"	3	3⅛
1¼	12	13	1¼	1	2¾	10	"	3⅛	3¼
1⅜	12	12½	1⅜	1⅜	3	10	"	3⅜	3⅓
1½	12	12	1½	16-10	3¼	10	"	3⅝	4⅛
1⅝	12	11½	1⅝	17-10	3½	10	"	4¼	4⅜
1¾	12	11	1¾	18-10	4	10	"	5	5¼
1 13-16	12	11	1 13-16	19-10	5	10	"	7	8
1⅞	12	11&10	1⅞	1-15-16					

BAR AND SHEET LEAD.—*Weight in Pounds.*

Thickness, or Diam., or Side; Inches.	Sheets per Square Ft.	Square Bars 1 Foot Long.	Round Bars 1 Foot Long.	Thickness, or Diam., or Side; Inches.	Sheets per Square Ft.	Square Bars 1 Foot Long.	Round Bars 1 Foot Long.
1-16	3.71	.02	.014	1 1-16	63.2	5.6	4.4
⅛	7.43	.079	.06	⅛	66.87	6.26	4.91
3-16	11.	.175	.136	3-16	70.51	6.98	5.5
¼	14.08	.31	.245	¼	74.35	7.74	6.1
5-16	18.05	.486	.38	5-16	78.05	8,55	6.73
⅜	22.02	.695	.549	⅜	81.76	9.38	7.38
7-16	26.	.948	.745	7-16	85.48	10,18	8.05
½	29.75	1.25	.975	½	89.28	11.0	8.75
9-16	33.49	1.55	1.24	9-16	93.	13.05	9 50
⅝	37.18	1.95	1.51	⅝	96.78	13.15	10.25
11-16	40.87	2.33	1.85	11-16	100.5	14.15	11.06
¾	44.58	2.8	2.2	¾	104.1	15.18	11.88
13-16	48.28	3.28	2.58	13-16	107.8	16.30	12.76
⅞	52.12	3.8	2.98	⅞	112.3	17.45	13.66
15-16	56.05	4.35	3.41	15-16	116.	18.10	14.61
1	59.48	4.95	3.9	2	119.6	19.78	15.58

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WIRE—IRON, STEEL, COPPER, BRASS.

Weight of 100 Feet in Pounds.

AMERICAN WIRE GAUGE.					BIRMINGHAM WIRE GAUGE.				
No. of Gauge.	Wire—per Lineal Foot.				No. of Gauge.	Wire—per Lineal Foot.			
	Iron.	Steel.	Copper.	Brass.		Iron.	Steel.	Copper.	Brass.
0000	56.07	56.60	64.05	60.52	0000	54.62	55.13	62.39	58.93
000	44.47	44.89	50.79	47.99	000	47.86	48.32	54.67	51.64
00	35.26	35.6	40.28	38.07	00	38.27	38.63	43.71	41.28
0	27.97	28.23	31.94	30.18	0	38.63	30.92	34.99	33.05
1	22.18	22.39	25.33	23.93	1	23.85	24.07	27.24	25.73
2	17.59	17.75	20.09	18.98	2	21.37	21.57	24.41	23.06
3	13.95	14.08	15.93	15.05	3	17.78	17.94	20.3	19.18
4	11.06	11.17	12.63	11.94	4	15.01	15.15	17.15	16.19
5	8.772	8.855	10.02	9.467	5	12.82	12.95	14.65	13.84
6	6.957	7.022	7.946	7.507	6	10.92	11.02	12.47	11.78
7	5.552	5.568	6.301	5.954	7	8.586	8.667	9.807	9.263
8	4.375	4.416	4.998	4.722	8	7.214	7.283	8.241	7.783
9	3.47	3.503	3.964	3.744	9	5.805	5.859	6.63	6.262
10	2.751	2.777	3.143	2.969	10	4.758	4.803	5.435	5.133
11	2.182	2.203	2.492	2.355	11	3.816	3.852	4.359	4.117
12	1.730	1.747	1.977	1.867	12	3.148	3.178	3.596	3.397
13	1.372	1.385	1.567	1.481	13	2.392	2.414	2.732	2.58
14	1.089	1.099	1.243	1.174	14	1.826	1.843	2.085	1.969
15	.8631	.8712	.9859	.9315	15	1.374	1.387	1.569	1.482
16	.6845	.6909	.7819	.7587	16	1.119	1.13	1.279	1.208
17	.5427	.5478	.6199	.5857	17	.8915	.9	1.018	.9618
18	.4304	.4344	.4916	.4645	18	.6363	.6423	.7268	.6864
19	.3413	.3445	.3899	.3683	19	.4675	.472	.534	.5043
20	.2708	.2734	.3094	.292	20	.3246	.3277	.3709	.3502
21	.2147	.2167	.2452	.2317	21	.2714	.274	.31	.2929
22	.1703	.1719	.1945	.1838	22	.2079	.2098	.2373	.2241
23	.135	.1363	.1542	.1457	23	.1656	.1672	.1892	.1788
24	.1071	.1081	.1223	.1155	24	.1283	.1295	.1465	.1384
25	.0849	.0857	.097	.0916	25	.106	.107	.1211	.1144
26	.0673	.068	.0769	.0727	26	.0859	.0867	.0981	.0926
27	.0534	.0539	.061	.0576	27	.0678	.0685	.0775	.0732
28	.0423	.0427	.0484	.0457	28	.0519	.0524	.0593	.056
29	.0336	.0339	.0383	.0362	29	.0448	.0452	.0511	.0483
30	.0266	.0269	.0304	.0287	30	.0382	.0385	.0436	.0412
31	.0211	.0213	.0241	.0228	31	.0265	.0267	.0303	.0286
32	.0167	.0169	.0191	.0181	32	.0215	.0217	.0245	.0231
33	.0133	.0134	.0152	.0143	33	.017	.0171	.0194	.0183
34	.0105	.0106	.0120	.0114	34	.013	.0131	.0148	.014
35	.0083	.0084	.0096	.009	35	.0066	.0067	.0076	.0071
36	.0066	.0067	.0076	.0071	36	.0042	.0043	.0048	.0046

NUMBER OF NAILS AND TACKS PER POUND.

NAILS.			TACKS.		
Title.	Size.	No. per lb.	Title.	Length.	No. per lb.
3-penny fine	1½ inch.	760 nails.	1 oz.	⅛	16,000
3 "	1¼ "	480 "	1½ "	3-16	10,666
4 "	1½ "	300 "	2 "	¼	8,000
5 "	1¾ "	200 "	2½ "	5-16	6,400
6 "	2 "	160 "	3 "	⅜	5,333
7 "	2¼ "	128 "	4 "	7-16	4,000
8 "	2½ "	92 "	6 "	9-16	2,666
9 "	2¾ "	72 "	8 "	⅝	2,000
10 "	3 "	60 "	10 "	11-16	1,600
12 "	3¼ "	44 "	12 "	¾	1,333
16 "	3½ "	32 "	14 "	13-16	1,143
20 "	4 "	24 "	16 "	⅞	1,000
30 "	4½ "	18 "	18 "	15-16	888
40 "	5 "	14 "	20 "	1	800
50 "	5½ "	12 "	22 "	1 1-16	727
60 "	6 "	10 "	24 "	1⅛	666
6-penny fence	2 "	80 "			
8 "	2½ "	50 "			
10 "	3 "	34 "			
12 "	3¼ "	29 "			

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MANILA CORDAGE, ROPES AND CABLES.

Size, Circumference Inches	Size, Diameter Inches.	Weight of 100 Fathoms.	Feet in One Pound.	Strain borne by New Ropes, lbs.	Tarred Hemp. Weight of 100 Fathoms.
				For Ropes in use deduct ⅓ from these figures, to allow for chafing, &c.	
1¼	⅜	31	20		40
1½	½	44	14		55
1¾	9-16	60	10		75
2	⅝	79	7½	3,000	100
2¼	¾	99	6	4,000	125
2½	13-16	122	5	5,000	155
2¾	⅞	146	4	6,000	190
3	1	176	3⅜	7,000	225
3¼	1 1-16	207	3	8,500	265
3½	1⅛	240	2½	9,500	300
3¾	1¼	275	2 1-6	11,000	355
4	1 5-16	305	2	12,500	405
4¼	1⅜	355	1 8-12	14,000	455
4½	1½	395	1½	16,000	500
5	1⅝	490	1¼	20,000	630
5½	1¾	595	1	24,000	750
			INCHES.		
6	2	705	10	27,000	910
6½	2⅛	825	8½	31,500	1,050
7	2¼	960	7½	37,000	1,235
7½	2½	1,100	6¾	42,500	1,400
8	2⅝	1,255	5¾	48,500	1,600
8½	2⅞	1,415	5	54,500	1,820
9	3	1,585	4½	61,500	2,050

To Ascertain the Strength of Cables.—Multiply the square of the circumference in inches by 120, and the product is the weight the cable will bear in pounds, with safety.

To Ascertain the Strength of Ropes.—Multiply the square of the circumference in inches by 200, and it gives the weight the rope will bear in pounds, with safety.

To Ascertain the Weight of Manila Ropes and Hawsers.—Multiply the square of the circumference in inches by .03, and the product is the weight in pounds of a foot in length.

This is but an approximation, sufficiently correct for many purposes.

SHIP SPIKES.

NUMBER IN 100 LBS.

Size in Inches.		No. in 100 lbs.	Size in Inches.		No. in 100 lbs.	Size in Inches.		No. in 100 lbs.
Side.	Length.		Side.	Length.		Side.	Length.	
¼	3	1910	7-16	4	542	9-16	6	221
¼	3½	1585	7-16	4¼	503	9-16	6½	200
¼	4	1326	7-16	5	461	9-16	7	190
¼	4½	1223	7-16	5¼	423	9-16	7½	180
¼	5	1025	7-16	6	402	9-16	8	170
5-16	3	1010	7-16	6½	321	9-16	8½	160
5-16	3½	963	½	5	340	9-16	9	150
5-16	4	810	½	5½	312	9-16	10	140
5-16	4½	605	½	6	298	⅝	8	140
5-16	5	583	½	6½	280	⅝	9	120
5-16	6	521	½	7	261	⅝	10	110
			½	7½	240	⅝	11	100
			½	8	223	¾	10	80
						¾	15	60

NUMBER OF BURDEN'S RIVETS IN 100 LBS.

Length Inches.	Thickness in Inches.				Length Inches.	Thickness in Inches.			
	½	⅝	11-16	¾		½	⅝	11-16	¾
⅞	1,092	665			3¼	433	267	212	180
⅞	1,027	597			½	418	248	201	169
1	940	538	460		¾	395	241	192	160
1⅛	840	512	415		4		230	184	158
1⅛	797	487	389	356	¼		220	177	150
1¼	760	460	370	329	½		210	171	146
1⅜	730	440	357	280	¾		200	166	138
1⅜	711	420	340	271	5		190	161	135
1½	693	390	325	262	¼		180	156	130
1⅝	648	375	312	257	½		172	151	124
2	608	360	297	243	¾		164	145	120
1⅛	573	354	289	237	6		157	140	115
1⅛	555	347	280	232	¼		150	138	111
1¼	525	335	260	220	½		146	134	107
1¾	500	312	242	208	¾		143	129	104
3	460	290	224	197	7		140	125	100

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WEIGHT OF SHEET ZINC.

WEIGHT IN POUNDS PER SQUARE FOOT, AND FOR SHEET OF 36x84.

No.	Square foot.	Sheet.	No.	Square foot.	Sheet.
4	0.33	6.93	13	1.22	25.68
5	0.40	8.40	14	1.36	28.56
6	0.47	10.05	15	1.49	31.36
7	0.54	11.47	16	1.63	34.20
8	0.61	12.90	17	1.89	39.88
9	0.68	14.32	18	2.17	45.55
10	0.82	17.16	19	2.44	51.23
11	0.95	20.00	20	2.71	56.91
12	1.09	22.84			

THICKNESS OF BOILER IRON REQUIRED AND PRESSURES ALLOWED BY THE LAWS OF THE UNITED STATES.

Pressure equivalent to the Standard for a Boiler 42-in. in Diameter and ¼ in. Thick.

DIAMETER.

Thickness in 16ths.	34 Inches. Lbs.	36 Inches. Lbs.	38 Inches. Lbs.	40 Inches. Lbs.	42 Inches. Lbs.	44 Inches. Lbs.	46 Inches. Lbs.
5	169.9	160.4	152.	144.4	137.5	131.2	125.5
4¼	158.5	149.7	141.8	134.7	128.3	122.5	117.2
4¼	147.2	139.1	131.8	125.1	119.2	113.7	108.8
4	135.9	128.3	121.6	115.5	110.	105.	100.
3¾	124.5	117.6	111.4	105.9	100.8	96.2	92.
3½	113.2	106.9	101.3	96.2	91.7	87.5	83.4
3	101.9	96.2	91.2	82.6	82.5	78.7	75.1

SQUARE BAR IRON.

Weight of a Running Foot, in Pounds.

Thick, Ins.	Weight per Foot, lbs.	Thick, Ins.	Weight per Foot, lbs.	Thick, Ins.	Weight per Foot, lbs.	Thick, Ins.	Weight per Foot, lbs.
1-16	.0131	1 1-16	3.80	2⅛	15.15	4⅛	57.2
⅛	.0525	⅛	4.25	¼	17.	¼	60.75
3-16	.1182	3-16	4.73	⅜	18.5	⅜	64.35
¼	.2103	¼	5.25	½	20.5	½	68.1
5-16	.327	5-16	5.78	⅝	23.1	⅝	72.
⅜	.4735	⅜	6.35	¾	25.2	¾	75.65
7-16	.6445	7-16	6.95	⅞	27.5	⅞	79.80
½	.84	½	7.55	3	30.05	5	83.8
9-16	1.063	9-16	8.2	⅛	32.75	⅛	88.25
⅝	1.314	⅝	8.85	¼	35.5	¼	92.5
11-16	1.59	11-16	9.57	⅜	38.25	⅜	97.15
¾	1.891	¾	10.30	½	41.15	½	101.
13-16	2.221	13-16	11.05	⅝	44.15	⅝	105.8
⅞	2.575	⅞	11.83	¾	47.20	¾	110.5
15-16	2.95	15-16	12.62	⅞	50.25	⅞	115.15
1	3.35	2	13.4	4	53.75	6	120.25

For STEEL, multiply tabular number above (for size) by 1.01.

ROUND BAR IRON.

Weight of a Running Foot, in Pounds.

Diam., Ins.	Weight per Foot, lbs.	Diam. Ins.	Weight per Foot, lbs.	Diam., Ins.	Weight per Foot, lbs.	Diam., Ins.	Weight per Foot, lbs.
1-16	.01	1 1-16	2.975	2⅛	11.9	4⅛	44.85
⅛	.0411	⅛	3.338	¼	13.3	¼	47.54
3-16	.0925	3-16	3.725	⅜	14.75	⅜	50.33
¼	.1651	¼	4.12	½	16.41	½	53.32
5-16	.2573	5-16	4.545	⅝	18.1	⅝	56.34
⅜	.371	⅜	5.	¾	19.85	¾	59.44
7-16	.505	7-16	5.455	⅞	21.5	⅞	62.62
½	.657	½	5.945	3	23.7	5	65.88
9-16	.835	9-16	6.445	⅛	25.55	⅛	69.23
⅝	1.031	⅝	6.975	¼	27.81	¼	72.65
11-16	1.235	11-16	7.52	⅜	29.85	⅜	76.18
¾	1.475	¾	8.05	½	32.25	½	79.75
13-16	1.74	13-16	8.65	⅝	34.45	⅝	83.45
⅞	2.015	⅞	9.25	¾	37.1	¾	87.20
15-16	2.317	15-16	9.9	⅞	39.5	⅞	91.05
1	2.625	2	10.55	4	41.95	6	95.

For STEEL, multiply tabular number above (for size) by 1.01.

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VALUE OF IRON.

Value per Gross Ton (2240 lbs.) of IRON, at from 1-16th of a cent to 10 cents per Pound, increasing at rate of 1-16th and ⅛th of a cent per Pound.

Per lb. in cts. and 1-16ths.	Price per Ton.	Per lb. in cts. and 1-16ths.	Price per Ton.	Per lb. in cts. and 1-8ths.	Price per Ton.
1-16	$1 40	2 5-8	$58 80	3-8	$165 20
1-8	2 80	11-16	60 20	1-2	168 00
3-16	4 20	3-4	61 60	5-8	170 80
1-4	5 60	13-16	63 00	3-4	173 60
5-16	7 00	7-8	64 40	7-8	176 40
3-8	8 40	15-16	65 80	8	179 20
7-16	9 80	3	67 20	1-8	182 00
1-2	11 20	1-8	70 00	1-4	184 80
9-16	12 60	1-4	72 80	3-8	187 60
5-8	14 00	3-8	75 60	1-2	190 40
11-16	15 40	1-2	78 40	5-8	193 20
3-4	16 80	5-8	81 20	3-4	196 00
13-16	18 20	3-4	84 00	7-8	198 80
7-8	19 60	7-8	86 80	9	201 60
15-16	21 00	4	89 60	1-8	204 40
1	22 40	1-8	92 40	1-4	207 20
1-16	23 80	1-4	95 20	3-8	210 00
1-8	25 20	3-8	98 00	1-2	212 80
3-16	26 60	1-2	100 80	3-4	218 40
1-4	28 00	5-8	103 60	10	224 00
5-16	29 40	3-4	106 10	1-8	226 80
3-8	30 80	7-8	109 20	1-4	229 60
7.16	32 20	5	112 00	3-8	232 40
1-2	33 60	1-8	114 80	1-2	235 20
9.16	35 00	1-4	117 60	5-8	238 00
5.8	36 40	3-8	120 40	3-4	240 80
11-16	37 80	1-2	123 20	7-8	243 60
3-4	39 20	5-8	126 00	11	246 40
13-16	40 60	3-4	128 80	1-8	249 20
7-8	42 00	7-8	131 60	1-4	252 00
15-16	43 40	6	134 40	3-8	254 80
2	44 80	1-8	137 20	1-2	257 60
1-16	46 20	1-4	140 00	5-8	260 40
1-8	47 60	3-8	142 80	3-4	263 20
3-16	49 00	1-2	145 60	7-8	266 00
1-4	50 40	5-8	148 40	12	268 80
5-16	51 80	3-4	151 20	1-8	271 60
3-8	53 20	7.8	154 00	1-4	274 40
7-16	54 60	7	156 80	3-8	277 20
1-2	56 00	1-8	159 60	1-2	280 00
9-16	57 40	1-4	162 40		

Value per Gross Ton (2240 lbs.) of IRON at from 1-10th of a cent to 10 cents per Pound, increasing at rate of 1-10th of a cent per Pound.

Per lb. in cts. and 1-10ths.	Price per Ton.	Per lb. in cts. and 1-10ths.	Price per Ton.	Per lb. in cts. and 1-10ths.	Price per Ton.
1-10	$2 24	3 5-10	$78 40	6 8-10	$152 32
2-	4 48	6-	80 64	9-	154 56
3-	6 72	7-	82 88	7	156 80
4-	8 96	8-	85 12	1-10	158 04
5-	11 20	9-	87 36	2-	161 28
6-	13 44	4	89 60	3-	163 52
7-	15 68	1-10	91 84	4-	165 76
8-	17 92	2-	94 08	5-	168 00
9-	20 16	3-	96 32	6-	170 24
1	22 40	4-	98 56	7-	172 48
1-10	24 64	5-	100 80	8-	174 72
2-	26 88	6-	103 04	9-	176 96
3-	29 12	7-	105 28	8	179 20
4-	31 36	8-	107 52	1-10	181 44
5-	33 60	9-	109 76	2-	183 68
6-	35 84	5	112 00	3-	185 92
7-	38 08	1-10	114 24	4-	188 16
8-	40 32	2-	116 48	5-	190 40
9-	42 56	3-	118 62	6-	192 64
2	44 80	4-	120 96	7-	194 88
1-10	47 04	5-	123 20	8-	197 12
2-	49 28	6-	125 44	9-	199 36
3-	51 52	7-	127 68	9	201 60
4-	53 76	8-	129 92	1-10	203 84
5-	56 00	9-	132 16	2-	206 08
6-	58 24	6	134 40	3-	208 32
7-	60 48	1-10	136 64	4-	210 56
8-	62 72	2-	138 88	5-	212 80
9-	64 96	3-	141 12	6-	215 04
3	67 20	4-	143 36	7-	217 28
1-10	69 44	5-	145 60	8-	219 52
2-	71 68	6-	147 84	9-	221 76
3-	73 92	7-	150 08	10	224 00
4-	76 16				

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WEIGHT OF ONE FOOT OF BAR STEEL.

ROUND.		SQUARE.		OCTAGON.	
Diam. In.	Lbs.	Side In.	Lbs.	Diam.	Lbs.
¼	.166	¼	.213	½	.84
⅜	.375	⅜	.479	⅝	1. 3
½	.667	½	.855	¾	1.75
⅝	1.04	⅝	1.33	⅞	2.25
¾	1.50	¾	1.91	1	2.75
⅞	2.05	⅞	2.61	1⅛	3.66
1	2.67	1	3.40	1¼	4.55
1⅛	3.38	1⅛	4.34	1⅜	5.50
1¼	4.17	1¼	5.32	1½	6.45
1⅜	5.05	1⅜	6.44	1⅝	7.75
1½	6.00	1½	7.67	1¾	9.20
1⅝	7.05	1⅝	9.00	1⅞	10.04
1¾	8.17	1¾	10.44	2	11.60
1⅞	9.38	1⅞	11.98	2⅛	13.14
2	10.66	2	13.63	2¼	14.75
2⅛	12.04	2⅛	15.35	2⅜	16 30
2¼	13.51	2¼	17.20	2½	17.85
2⅜	15.05	2⅜	19.17	2⅝	19.50
2½	16.68	2½	21.20	2¾	21.25
2⅝	18 48	2⅝	23.30	2⅞	22.69
2¾	20.19	2¾	25.70	3	25.00
2⅞	22.00	2⅞	27.74		
3	24.03	3	30.60		
3⅛	26.12	3⅛	33.18		
3¼	28.30	3¼	35.90		
3⅜	30.45	3⅜	38.78		
3½	32.70	3½	41.65		
3⅝	35.12	3⅝	44.17		
3¾	37.54	3¾	46.70		
4	42.72	4	54.40		
4¼	48.22	4¼	61.40		
4½	54.06	4½	68.85		
5	66.75	5	85.00		

LIGHT WROUGHT IRON ARTESIAN TUBE AND CASING FOR OIL WELLS.

Standard Sizes.

Outside Diam., Inches.	Inside Diam., Inches.	Weight per Foot. Pounds.	Outside Diam., Inches.	Inside Diam., Inches.	Weight per Foot. Pounds.
1¼	1⅛	1.665	4¼	4	5.800
2¼	2	2.238	4½	4⅛	6.070
2½	2¼	2.755	5	4⅝	7.336
2¾	2½	3.045	5¼	5	7.667
3	2¾	3.333	5½	5 3-16	8.063
3¼	3	3.958	6	5⅝	9.346
3½	3¼	4.272	6⅝	6¼	10.064
3¾	3½	4.950	7	6⅝	12.435
4	3¾	5.320	8	7⅝	15.109
			8⅝	8¼	16.155

BRAZED COPPER PIPES.

Weight per Running Foot.

Diam. Inches.	THICKNESS IN INCHES.					
	1-16	3-32	⅛	5-16	¼	7-16
1	.8	1.2	1.7	2.7	3.8	4.9
1-4	1.	1.5	2.1	3.3	4.5	6.
1-2	1.2	1.8	2.5	3.8	5.3	6.9
3-4	1.4	2.1	2.8	4.4	6.	7.8
2	1.5	2.4	3.2	4.9	6.8	8.7
1-4	1.8	2.6	3.6	5.5	7.6	9.7
1-2	1.9	2.9	4.	6.1	8.4	10.6
3-4	2.1	3.2	4.4	6.7	9.1	11.7
3	2.3	3.5	4.7	7.3	9.9	12.5
1-2	2.7	4.	5.5	8.4	11.4	14.4
4	3.	4.6	6.3	9.5	12.9	16.3
1-2	3.4	5.2	7.	10.7	14.4	18.2
5	3.8	5.7	7.8	11.8	16.	20.1
1-2	4.2	6.3	8.5	13.1	17.5	22.5
6	4.6	6.8	9.3	14.1	19.	23.9

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LAP WELDED AMERICAN CHARCOAL IRON BOILER TUBES.

Table of Standard Sizes.

External Diam.	External Circumference.	Internal Diam.	Internal Circumference.	Thickness.	Length of Pipe per square Ft. of inside surface.	Length of Pipe per Square Ft of outside surface.	Internal Area.	External Area.	Weight per Foot.
Ins.	Ins.	Ins.	Ins.	Ins.	Feet.	Feet.	Ins.	Ins.	Lbs.
1	3.142	0.856	2 689	0.072	4.460	3.819	0.575	0.785	0.708
1¼	3.927	1.106	3.474	0.072	3.455	3.056	0.960	1.227	0.968
1½	4.712	1.334	4 191	0.083	2.863	2.547	1.396	1.767	1.250
1¾	5.598	1.560	4.901	0.095	2.448	2.183	1.911	2.405	1.665
2	6.283	1.804	5.667	0.098	2.118	1.909	2.556	3.142	1.981
2¼	7.069	2.054	6.484	0.098	1.850	1.698	3.314	3.976	2.238
2½	7.854	2.283	7.172	0.109	1.673	1.528	4.094	4.909	2.755
2¾	8.639	2.533	7.957	0.109	1.508	1.390	5.039	5.940	3.045
3	9.425	2.783	8.743	0.109	1.373	1.273	6.083	7.069	3.333
3¼	10.210	3.012	9.462	0.119	1.268	1.175	7.125	8.296	3.958
3½	10.995	3.262	10.248	0.119	1.171	1.091	8.357	9.621	4.272
3¾	11.781	3.512	11.033	0.119	1.088	1.018	9.687	11.045	4.590
4	12.566	3.741	11.753	0.130	1.023	0.955	10.992	12.566	5.320
4¼	14.137	4.241	13.323	0.130	0.901	0.849	14.126	15.904	6.010
5	15.708	4.72	14.818	0.140	0.809	0.764	17,497	19.635	7.226
6	18.849	5.699	17.904	0.151	0.670	0.637	25.509	28.274	9.346
7	21.991	6.657	20.914	0.172	0.574	0.545	34.805	38.484	12.435
8	25.132	7.636	23.989	0.182	0.500	0.478	45.795	50.265	15.109
9	28.274	8.615	27.055	0.193	0.444	0.424	58.291	63.617	18 002
10	31.416	9.573	30.074	0.214	0 399	0.382	71.975	78 540	22.19

ANGLE AND T IRON.

Weight of Running Foot in Pounds.

Weights of ⌙ (channel) and ⋈ iron may be found from the Table of Angle and T iron in the following manner, provided the web and flanges are of the same mean thickness:

Let the number of the side column referred to equal half the sum of the depth of web and breadth of both flanges; then twice the weight corresponding thereto will be the weight per lineal foot, according to the thickness, of the channel or ⋈ iron required.

Sum of Width of Flanges.	THICKNESS IN FRACTIONS OF AN INCH.									
Inches.	3-16	¼	5-16	⅜	7-16	½	9-16	⅝	11-16	¾
2	1.13	1.46	1.76	2.03						
1/16	1.21	1.56	1.89	2.19						
1/8	1.29	1.67	2.02	2.34						
3/16	1.37	1.77	2.15	2.5						
1/4	1.45	1.88	2.28	2.66	3.01					
5/16	1.52	1.98	2.41	2.81	3.19					
3/8	1.6	2.08	2.54	2.92	3.37					
7/16	1.68	2.19	2.67	3 13	3.55					
3	1.76	2.29	2.8	3.28	3.74	4.17				
1/16	1.84	2.4	2,93	3.44	3.92	4.37				
1/8	1.91	2.5	3.06	3.59	4.1	4.58				
3/16	1.99	2.6	3.19	3.75	4.28	4.79				
1/4	2.07	2.71	3.32	3.91	4.47	5.	5.51			
5/16	2.15	2.81	3.45	4.06	4.65	5.21	5.74			
3/8	2.23	2.92	3.58	4.22	4.83	5.42	5.98			
7/16	2.3	3.02	3.71	4.38	5.01	5.63	6.21			
4	2.38	3.13	3.84	4 53	5.2	5.83	6.45	7.04		
1/16	2.46	3.23	3.97	4.69	5.38	6.04	6.68	7.29		
1/8	2.54	3.33	4.1	4.84	5.56	6.25	6.91	7.55		
3/16	2.62	3.44	4.23	5.	5.74	6.46	7.15	7.81		
1/4	2.7	3.54	4.36	5.16	5.92	6.67	7.38	8.07		
5/16	2.77	3.65	4 49	5.31	6.11	6.87	7.62	8.33	9.02	
3/8	2.85	3.75	4.62	5.47	6.29	7.08	7.85	8.59	9.31	
7/16	2.93	3.85	4.75	5.62	6.47	7.29	8.09	8.85	9.6	
5	3.01	3.96	4.88	5.78	6.65	7.50	8.32	9.11	9.88	10 62
1/16	3.09	4.06	5.01	5.94	6.84	7.71	8.55	9.37	10.17	10.94
1/8	3.16	4.17	5.14	6.09	7.02	7.91	8.79	9.63	10.45	11.25
3/16	3.24	4.27	5.27	6.25	7.2	8.12	9.02	9.9	10.74	11.56
1/4	3.32	4.37	5.4	6.41	7.38	8.33	9.26	10.16	11.03	11.87
5/16	3.4	4.48	5.53	6.56	7.56	8.54	9.49	10.42	11.31	12.19
3/8	3.48	4.58	5.66	6.72	7.75	8.75	9.73	10.68	11.6	12.5
7/16	3.55	4.69	5.79	6.87	7.93	8.96	9.96	10.94	11.89	12.81
6	3.63	4.79	5.92	7.03	8.11	9.17	10.19	11.2	12.17	13.12
1/16	3.71	4.9	6.05	7.19	8.29	9.37	10.43	11.46	12.46	13.43
1/8	3.79	5.	6.18	7.34	8.48	9.58	10.66	11.72	12.74	13 75
3/16	3.87	5.1	6.32	7.5	8.66	9.79	10.9	11.98	13.03	14.06
1/4	3.95	5.21	6.45	7.66	8.84	10.00	11.13	12 24	13.32	14.37
5/16	4.02	5.31	6.58	7.81	9.02	10.21	11.37	12.5	13.6	14.68
3/8	4.1	5.42	6.71	7 97	9 21	10.42	11.6	12.76	13.89	15.
7/16	4.18	5.52	6 84	8.13	9.39	10.63	11.84	13,02	14 18	15.3

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ANGLE AND T IRON.—(*Continued.*)

Weight of Running Foot in Pounds.

Sum of Width of Flanges.	THICKNESS IN FRACTIONS OF AN INCH.									
Inches.	5 16	⅜	7-16	½	9-16	⅝	11-16	¾	⅞	1
7	6.97	8.28	9.57	10.83	12.07	13 28	14.47	15.62	17.86	20.
1-8	7.10	8 44	9.75	11.04	12.3	13.54	14.75	15.93	18.23	20.42
1-4	7.23	8.59	9.93	11.25	12.54	13.8	15.04	16.25	18.59	20.83
3-8	7.36	8.75	10.12	11.46	12.77	14.06	15.33	16.56	18.96	21.25
1-2	7.49	8.91	10.3	11.67	13.01	14.32	15.61	16.87	19.32	21.67
5-8	7.62	9.06	10.48	11.87	13.24	14.58	15.9	17.19	19.69	22.08
3-4	7.75	9.22	10.66	12.08	13.48	14.84	16.18	17.5	20.05	22.5
7-8	7.88	9.37	10.85	12 29	13.71	15.1	16.47	17.81	20.42	22.92
	8.01	9.53	11.03	12.5	13.94	15.36	16.76	18.12	20.78	23.33
81-8	8.14	9.69	11.21	12.71	14.18	15.62	17.04	18.44	21.15	23.73
1-4	8.27	9.84	11.39	12.92	14.41	15.88	17.33	18.75	21.51	24.16
3-8	8.40	10.	11.57	13.12	14.65	16.15	17.62	19.06	21.87	24.58
1-2	8.53	10.16	11.76	12.33	14.88	16.41	17.9	19.37	22.24	25.
5-8	8.66	10.31	11.94	13.54	15 12	16.67	18.19	19.69	22.6	25.41
3-4	8.79	10.47	12.12	13.75	15.35	16.93	18.47	20.	22.97	25.83
7-8	8.92	10.62	12.3	13.96	15.58	17.19	18 76	20.31	23.33	26.25
9	9.05	10.78	12.49	14.17	15.82	17.45	19.05	20.62	23.7	26.66
1-4	9.31	11.09	12.85	14.58	16.29	17.97	19.62	21.25	24.42	27.50
1-2	9.57	11.41	13.22	15.	16.76	18.49	20.19	21.87	25.15	28.33
3-4	9.83	11.72	13 58	15.42	17.23	19.01	20.77	22.50	25.88	29.16
10	10.09	12.03	13 95	15 83	17.7	19.53	21.34	23.12	26.61	30.
1-4	10.35	12.34	14.31	16.25	18.16	20.05	21.91	23.75	27.34	30.83
1-2	10.61	12.66	14.67	16.67	18.63	20.57	22.49	24.37	28.07	31.67
3-4	10.87	12.97	15.04	17.08	19.1	21.09	23.06	25.	28.8	32.5
11	11.13	13.28	15.4	17.5	19.57	21.61	23.63	25.62	29.53	33.33
1-4	11.39	13.59	15.77	17.92	20.04	22.13	24.2	26 25	30.26	34.17
1-2	11.65	13.91	16.13	18.33	20.51	22.66	24.78	26.87	30.99	35.
3-4	11.91	14.22	16.5	18.75	20.98	23.18	25.35	27.5	31·72	35.83
12	12.17	14.53	16 86	19.07	21.44	23.7	25.92	28.12	32.45	36.67
1-4		14.84	17.23	19.58	21.91	24 22	26.5	28.75	33.17	37.5
1-2		15.16	17.59	20.	22 38	24.74	27.07	29.37	33.9	38.33
3-4			17.96	20.42	22.85	25.26	27.64	30.	34.63	39.16
13			18.32	20.83	23.32	25.78	28.22	30.62	35.36	40.
1-4				21 25	23.79	26.3	28.79	31.25	36.09	40.83
1-2				21.67	24.26	26.82	29.36	31.87	36.82	41.67
3-4				22.08	24.73	27.34	29.93	32.5	37.55	42.5
14				22.5	25.19	27.86	30.51	33 12	38.28	43.33
1-4				22.92	25.66	28.38	31.08	33.75	39.01	44.17
1-2				23.33	26.13	28.91	31.65	34.37	39.74	45.
3-4				23.75	26.6	29.43	32 22	35.	40.47	45.7
15				24.17	27.07	29.95	32.8	35.62	41.2	46.8

WEIGHT OF SHEET AND PLATE IRON.

Thickness in Inches.

Weight of a Square Foot in Pounds.

Inches Thick	Lbs. per Square Foot.	Inches Thick	Lbs. per Square Foot.	Inches Thick.	Lbs. per Square Foot.
9-16	22.5	1¾	70.62	3⅞	156.51
⅝	25.21	13-16	73.14	4	161.55
11-16	27.75	⅞	75.58	⅛	166.6
¾	30.25	15-16	78.20	¼	171.66
13-16	32.75	2	80.75	⅜	176.71
⅞	35.26	⅛	85.75	½	181.77
15-16	37.75	¼	90.81	⅝	186.79
1	40.35	⅜	95.86	¾	191.84
1-16	42.87	½	100.9	⅞	196.9
⅛	45.4	⅝	105.95	5	201.85
3-16	47.9	¾	111.	⅛	206.9
¼	50.45	⅞	116.1	¼	211.95
5-16	52.96	3	121.15	⅜	217.
⅜	55.45	⅛	126.21	½	222.05
7-16	58.01	¼	131 26	⅝	227.1
½	60.52	⅜	136.32	¾	232.15
9-16	63.05	½	141.37	⅞	237.2
⅝	65.56	⅝	146.41	6	242.25
11-16	68.11	¾	151.46		

For STEEL PLATES, multiply tabular number above (for size), by 1.01.

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WEIGHT OF SHEET AND PLATE IRON.

Thickness by Birmingham Wire Gauge and Inches.

Weight of a Square Foot in Pounds.

THICKNESS.			THICKNESS.		
B. W. Gauge.	Part of an Inch.	Weight, Pounds.	B. W. Gauge.	Part of an Inch.	Weight, Pounds.
36	.004	.162	11	.120	4.88
35	.005	.202		1/8 or .125	5.054
34	.007	.283	10	.134	5.426
33	.008	.322	9	.148	5.98
32	.009	.364		5-32 or .1562	6.305
31	.010	.405	8	.165	6.605
30	.012	.485	7	.180	7.27
29	.013	.526		3-16 or .1875	7.578
28	.014	.595	6	.203	8.005
27	.016	.676		7-32 or .2187	8.79
26	.018	.755	5	.22	8.912
25	.020	.811	4	.238	9.62
24	.022	.912		1/4 or .25	10.09
23	.025	1.018	3	.259	10.37
22	.028	1.137		9-32 or .2812	11.38
	1-32 or .03125	1.259	2	.284	11.525
21	.032	1.31	1	.3	12.15
20	.035	1.416		5-16 or .3125	12.58
19	.042	1.695	0	.340	13.715
18	.049	1.975		11-32 or .3437	13.875
17	.058	2.35		3/8 or .375	15.10
16	.065	2.637	00	.380	15.26
	1-16 or .0625	2.518		13-32 or .4062	16.34
15	.072	2.92	000	.425	17.125
14	.083	3.35		7-16 or .4375	17.65
	3-32 or .0937	3.78	0000	.454	18.30
13	.095	3.85		15-32 or .4687	18.90
12	.109	4 4	00000	1/2 or .50	20.20

For STEEL PLATES, multiply tabular number above (for size), by 1.01.

WEIGHT OF CAST IRON PIPES.

Dimensions in Inches.

Weight of One Running Foot in Pounds.

Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.
1	1/4	3.06	2 3/4	1-4	7.36	4	3-4	35.
"	3/8	5.06	"	3-8	11.4	"	7-8	42.
"	1/2	7.36	"	1-2	15.9	"	1	49.
"	5/8	10.00	"	5-8	20.9	4 1/4	1-4	11.
1 1/4	1/4	3.7	"	3-4	26.	"	3-8	17.
"	3/8	6.	"	7-8	31.1	"	1-2	23.5
"	1/2	8.6	3	1-4	7.95	"	5-8	30.
"	5/8	11.5	"	3-8	12.4	"	3-4	37.
1 1/2	1/4	4.3	"	1-2	17.2	"	7-8	44.
"	3/8	6.9	"	5-8	22.4	"	1	51.8
"	1/2	9.83	"	3-4	27.8	4 1/2	1-4	11.5
"	5/8	13.1	"	7-8	33.5	"	3-8	18.
"	3/4	16.5	3 1/4	1-4	8.5	"	1-2	24.5
1 3/4	1/4	4.91	"	3-8	13.5	"	5-8	31.4
"	3/8	7.83	"	1-2	18.6	"	3-4	38.7
"	1/2	11.	"	5-8	23.7	"	7-8	46.2
"	5/8	14.5	"	3-4	29.6	"	1	54.
"	3/4	18.4	"	7-8	35.6	4 3/4	1-4	12.2
2	1/4	5.52	3 1/2	1-4	9.2	"	3-8	19.
"	3/8	8.75	"	3-8	14 2	"	1-2	25.7
"	1/2	12.25	"	1-2	19.8	"	5-8	33.
"	5/8	16.15	"	5-8	25.3	"	3-4	40.5
"	3/4	20.25	"	3-4	31.5	"	7-8	48.4
2 1/4	1/4	6.14	"	7-8	37.6	"	1	56.5
"	3/8	9.67	3 3/4	1-4	9.82	5	1-4	13.
"	1/2	13.4	"	3-8	15.1	"	3-8	20.
"	5/8	17.6	"	1-2	20.8	"	1-2	27.
2 1/2	3/4	22.1	"	5-8	27.	"	5-8	34.5
"	1/4	6.75	"	3-4	33.3	"	3-4	42.6
"	3/8	10.5	"	7-8	40.	"	7-8	50.6
"	1/2	14.7	4	1-4	10.4	"	1	59.
"	5/8	19.1	"	3-8	16.	5 1/4	1-4	13.4
"	3/4	24.	"	1-2	22.3	"	3-8	20.9
	7/8	29.	"	5-8	28.6	"	1-2	28.2

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WEIGHT OF CAST IRON PIPES.—(*Continued.*)

Dimensions in Inches.

Weight of One Running Foot, in Pounds.

Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.
5¼	5-8	36.	9½	1 1-8	117.	17	7-8	153.
"	3-4	44.1	10	1-4	25.	"	1	176.
"	7-8	52.7	"	3-8	38.1	"	1 1-8	200.
"	1	61.4	"	1-2	51.5	"	1 1-4	226.
5½	1-4	14.1	"	5-8	65.2	"	1 3-8	250.
"	3-8	21.5	"	3-4	79.3	"	1 1-2	274.
"	1-2	29.6	"	7-8	93.5	18	1-2	91.
"	5-8	37.6	"	1	107.5	"	5-8	116.
"	3-4	46.	"	1 1-8	122.	"	3-4	140.
"	7-8	55.	10½	1-4	26.5	"	7-8	164.
"	1	64.	"	3-8	40.	"	1	188.
5¾	1-4	14.7	"	1-2	54.	"	1 1-8	210.
"	3-8	22.5	"	5-8	68.3	"	1 1-4	238.
"	1-2	31.	"	3-4	83.3	"	1 3-8	260.
"	5-8	39.	"	7-8	98.	"	1 1-2	289.
"	3-4	48.	"	1	113.	19	1-2	95.
"	7-8	57.	"	1 1-8	130.	"	5-8	120.
"	1	66.5	11	1-4	27.5	"	3-4	145.
6	1-4	15.3	"	3-8	42.1	"	7-8	170.
"	3-8	23.4	"	1-2	56.5	"	1	196.
"	1-2	32.	"	5-8	71.4	"	1 1-8	222.
"	5-8	40.7	"	3-4	86.5	"	1 1-4	250.
"	3-4	50.	"	7-8	102.1	"	1 3-8	275.
"	7-8	59.	"	1	117.5	"	1 1-2	304.
"	1	69.	"	1 1-8	135.	20	1-2	100.
"	1 1-8	79.	11½	1-4	28.9	"	5-8	128.
6½	1-4	16.5	"	3-8	43.9	"	3-4	154.
"	3-8	25.5	"	1-2	59.	"	7-8	181.
"	1-2	34.4	"	5-8	74.5	"	1	208.
"	5-8	44.	"	3-4	90.5	"	1 1-8	235.
"	3-4	53.4	"	7-8	106.5	"	1 1-4	260.
"	7-8	63.4	"	1	122.5	"	1 3-8	290.
"	1	74.	"	1 1-8	139.	"	1 1-2	318.
"	1 1-8	84.5	12	1-4	30.	21	1-2	105.
7	1-4	17.7	"	3-8	45.6	"	5-8	134.
"	3-8	27.1	"	1-2	61.3	"	3-4	160.
"	1-2	37.	"	5-8	77.6	"	7-8	189.
"	5-8	47.	"	3-4	94.	"	1	216.
"	3-4	57.	"	7-8	110.5	"	1 1-8	246.
"	7-8	68.	"	1	127.	"	1 1-4	275.
"	1	78.6	"	1 1-8	144.	"	1 3-8	305.
"	1 1-8	89.5	"	1 1-4	162.	"	1 1-2	333.
7½	1-4	19.	13	1-2	66.5	22	1-2	110.
"	3-8	29.	"	5-8	83.7	"	5-8	140.
"	1-2	39.5	"	3-4	101.5	"	3-4	170.
"	5-8	50.1	"	7-8	119.	"	7-8	197.
"	3-4	61.	"	1	137.	"	1	229.
"	7-8	72.	"	1 1-8	155.	"	1 1-8	255.
"	1	83.6	"	1 1-4	174.	"	1 1-4	288.
"	1 1-8	95.4	"	1 3-8	194.	"	1 3-8	315.
8	1-4	20.1	"	1 1-2	213.	"	1 1-2	350.
"	3-8	31.	14	1-2	71.3	23	1-2	115.
"	1-2	42.	"	5-8	89.5	"	5-8	146.
"	5-8	53.	"	3-4	108.5	"	3-4	176.
"	3-4	64.5	"	7-8	127.	"	7-8	205.
"	7-8	76.5	"	1	147.	"	1	235.
"	1	88.5	"	1 1-8	167.	"	1 1-8	265.
"	1 1-8	100.	"	1 1-4	189.	"	1 1-4	300.
8½	1-4	21.4	"	1 3-8	207.	"	1 3-8	331.
"	3-8	32.7	"	1 1-2	230.	"	1 1-2	360.
"	1-2	45.2	15	1-2	76.	24	1-2	120.
"	5-8	56.	"	5-8	96.	"	5-8	153.
"	3-4	68.1	"	3-4	117.	"	3-4	184.
"	7-8	81.	"	7-8	136.	"	7-8	215.
"	1	93.4	"	1	157.	"	1	245.
"	1 1-8	106.	"	1 1-8	178.	"	1 1-8	275.
9	1-4	23.	"	1 1-4	201.	"	1 1-4	310.
"	3-8	34.5	"	1 3-8	221.	"	1 3-8	342.
"	1-2	46.7	"	1 1-2	245.	"	1 1-2	374.
"	5-8	59.	16	1-2	81.	25	1-2	125.
"	3-4	72.	"	5-8	102.5	"	5-8	160.
"	7-8	85.	"	3-4	124.5	"	3-4	191.
"	1	98.3	"	7-8	144.	"	7-8	224.
"	1 1-8	111.	"	1	168.	"	1	255.
9½	1-4	24.	"	1 1-8	189.	"	1 1-8	290.
"	3-8	36.5	"	1 1-4	211.	"	1 1-4	325.
"	1-2	49.	"	1 3-8	234.	"	1 3-8	355.
"	5-8	62.2	"	1 1-2	257.	"	1 1-2	390.
"	3-4	75.5	17	1-2	86.	26	5-8	165.
"	7-8	89.	"	5-8	107.	"	3-4	200.
"	1	103.	"	3-4	130.	"	7-8	230.

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WEIGHT OF CAST IRON PIPES.—(*Continued.*)

Dimensions in Inches.

Weight of One Running Foot, in Pounds.

Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.	Diam.	Thickness.	Weight.
26	1	265.	33	1 1-8	376.	42	1 3-8	563.
"	1 1-8	300.	"	1 1-4	420.	"	1 1-2	610.
"	1 1-4	335.	"	1 3-8	464.	43	1	425.
"	1 3-8	369.	"	1 1-2	510.	"	1 1-8	478.
"	1 1-2	405.	34	3-4	255.	"	1 1-4	531.
27	5-8	169.	"	7-8	300.	"	1 3-8	559.
"	3-4	204.	"	1	350.	"	1 1-2	638.
"	7-8	239.	"	1 1-8	390.	44	1	434.
"	1	275.	"	1 1-4	435.	"	1 1-8	488.
"	1 1-8	310.	"	1 3-8	480.	"	1 1-4	542.
"	1 1-4	350.	"	1 1-2	525.	"	1 3-8	598.
"	1 3-8	385.	35	3-4	265.	"	1 1-2	651.
"	1 1-2	420.	"	7-8	310.	45	1	445.
28	5-8	175.	"	1	355.	"	1 1-8	501.
"	3-4	210.	"	1 1-8	400.	"	1 1-4	557.
"	7-8	250.	"	1 1-4	445.	"	1 3-8	612.
"	1	285.	"	1 3-8	495.	"	1 1-2	668.
"	1 1-8	325.	"	1 1-2	540.	46	1	457.
"	1 1-4	358.	36	3-4	270.	"	1 1-8	514.
"	1 3-8	395.	"	7-8	320.	"	1 1-4	571.
"	1 1-2	435.	"	1	360.	"	1 3-8	628.
29	5-8	181.	"	1 1-8	410.	"	1 1-2	710.
"	3-4	219.	"	1 1-4	460.	47	1	464.
"	7-8	255.	"	1 3-8	505.	"	1 1-8	522.
"	1	293.	"	1 1-2	555.	"	1 1-4	580.
"	1 1-8	335.	37	1	366.	"	1 3-8	638.
"	1 1-4	370.	"	1 1-8	411.	"	1 1-2	696.
"	1 3-8	410.	"	1 1-4	457.	"	1 5-8	754.
"	1 1-2	448.	"	1 3-8	503.	"	1 3-4	812.
30	3-4	225.	"	1 1-2	549.	48	1	474.
"	7-8	265.	38	1	378.	"	1 1-8	533.
"	1	304.	"	1 1-8	425.	"	1 1-4	593.
"	1 1-8	345.	"	1 1-4	473.	"	1 3-8	651.
"	1 1-4	385.	"	1 3-8	521.	"	1 1-2	711.
"	1 3-8	425.	"	1 1-2	567.	"	1 5-8	770.
"	1 1-2	464.	39	1	386.	"	1 3-4	829.
31	3-4	235.	"	1 1-8	434.	49	1	484.
"	7-8	276.	"	1 1-4	483.	"	1 1-8	544.
"	1	314.	"	1 3-8	531.	"	1 1-4	606.
"	1 1-8	355.	"	1 1-2	579.	"	1 3-8	665.
"	1 1-4	400.	40	1	397.	"	1 1-2	726.
"	1 3-8	435.	"	1 1-8	446.	"	1 5-8	786.
"	1 1-2	476.	"	1 1-4	496.	"	1 3-4	847.
32	3-4	245.	"	1 3-8	545.	50	1	493.
"	7-8	285.	"	1 1-2	595.	"	1 1-8	554.
"	1	327.	41	1	407.	"	1 1-4	614.
"	1 1-8	365.	"	1 1-8	457.	"	1 3-8	677.
"	1 1-4	410.	"	1 1-4	508.	"	1 1-2	741.
"	1 3-8	450.	"	1 3-8	559.	"	1 5-8	801.
"	1 1-2	500.	"	1 1-2	610.	"	1 3-4	862.
33	3-4	250.	42	1	416.	"	1 7-8	924.
"	7-8	295.	"	1 1-8	459.	"	2	986.
"	1	337.	"	1 1-4	511.			

WEIGHT OF FLAT IRON.

Weight of Running Foot, in Pounds.

Width in Inches.	THICKNESS IN INCHES.											
	1-16	1/8	3-16	1/4	5-16	3/8	7-16	1/2	5/8	3/4	7/8	1
1	.21	.41	.62	.83	1.04	1.25	1.46	1.67	2.08	2.5	2.92	3.33
1/16	.23	.47	.7	.94	1.17	1.41	1.64	1.87	2.34	2.81	3.28	3.75
1/8	.26	.52	.78	1.04	1.3	1.56	1.82	2.08	2.6	3 12	3.65	4.17
3/16	.29	.57	.86	1.14	1.43	1.72	2.01	2.29	2.86	3.44	4.01	4.58
1/4	.31	.62	.94	1.25	1.56	1.87	2.19	2.5	3.12	3.75	4.37	5.
5/16	.34	.68	1.01	1.35	1.69	2.03	2.37	2.71	3.38	4.06	4.74	5.42
3/8	.36	.73	1.09	1.46	1.82	2.19	2.55	2.92	3.64	4.37	5.1	5.83
7/16	.39	.78	1.17	1.56	1.95	2 34	2.73	3.12	3.9	4.69	5.47	6.25
2	.42	.83	1.25	1.67	2.08	2.5	2.92	3.33	4.16	5.	5.83	6.67
1/16	.44	.88	1.33	1.77	2.21	2.65	3.1	3.54	4.43	5 31	6.2	7.08
1/8	.47	.94	1.4	1.87	2.34	2.81	3.28	3.75	4.69	5.62	6.56	7.5
3/16	.5	.99	1.48	1.98	2.47	2.97	3.46	3.96	4.95	5.94	6.93	7.92
1/4	.52	1.04	1.56	2.09	2.6	3.12	3.65	4.17	5.21	6.25	7.29	8.33
5/16	.55	1.09	1.64	2.19	2.73	3.28	3.83	4.37	5.47	6.56	7.66	8.75
3/8	.57	1.14	1.72	2.29	2.86	3.44	4.01	4.58	5.73	6.88	8.02	9.17
7/16	.6	1.2	1.8	2.4	2.99	3.59	4.19	4.79	5.99	7.19	8.39	9.58

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WEIGHT OF FLAT IRON.—(*Continued.*)

Weight of Running Foot in Pounds.

Width in Inches.	THICKNESS IN INCHES.											
	1-16	⅛	3-16	¼	5-16	⅜	7-16	½	⅝	¾	⅞	1
3	.62	1.25	1.87	2.5	3.12	3.75	4.37	5.	6.25	7.5	8.75	10.
1/16	.65	1.3	1.95	2.6	3.25	3.91	4.56	5.21	6.51	7.82	9.12	10.42
1/8	.68	1.35	2.03	2.7	3.38	4.06	4.74	5.42	6.77	8.12	9.48	10.83
3/16	.7	1.4	2.11	2.81	3 52	4.22	4.92	5.62	7.03	8.44	9 84	11.25
1/4	.78	1.46	2.19	2.91	3.65	4.37	5.1	5.83	7.29	8.75	10.21	11 67
5/16	.76	1.51	2.27	3.02	3.78	4.53	5.29	6.04	7.55	9.07	10.59	12.06
3/8	.78	1.56	2.34	3.12	3.91	4.69	5.47	6.25	7.81	9.37	10.98	12.5
7/16	.81	1.61	2.42	3.23	4.08	4.84	5.65	6.46	8.07	9.68	11.3	12.92
4	.88	1.66	2.5	3.33	4.17	5.00	5.83	6.67	8 33	10.	11.65	13.33
1/16	.86	1.72	2.58	3.44	4.3	5.16	6.02	6.87	8.59	10.3	12.04	13.75
1/8	.88	1.77	2.66	3.54	4.43	5.31	6.2	7.08	8.85	10.62	12.4	14.15
3/16	.91	1.82	2.73	3.64	4.56	5.47	6.38	7.29	9.11	10.93	12.75	14.59
1/4	.94	1.87	2.81	3.75	4.69	5.62	6.56	7.5	9.37	11.25	13.12	15.00
5/16	.96	1.93	2.89	3.85	4.82	5.78	6.74	7.71	9.64	11 55	13.5	15.42
3/8	.99	1.98	2.97	3.96	4 95	5.94	6.93	7.92	9.89	11.87	13.85	15.83
7/16	1.01	2.03	3.05	4.06	5 08	6.1	7.11	8.12	10.15	12.2	14.22	16.25
5	1.04	2.08	1.12	4.17	5.21	6.25	7.29	8.33	10.42	12.5	14.59	16.65
1/16	1.06	2.13	3.2	4.27	5.34	6.41	7.48	8.54	10.69	12.8	14.95	17.09
1/8	1.1	2.19	3.28	4.37	5.47	6.56	7.66	8.75	10.93	13.13	15.3	17.5
3/16	1.12	2.24	3.36	4.48	5.6	6.72	7.84	8.96	11.2	13.43	15.68	17.92
1/4	1.14	2.29	3.44	4.58	5.73	6.88	8.02	9.17	11.45	13 75	16.03	18.33
5/16	1.17	2.34	3.52	4.69	5.86	7.03	8.2	9.37	11 72	14.07	16.4	18.75
3/8	1.2	2.39	3.59	4.79	6.	7.19	8.39	9.58	11.99	14.37	16.77	19.15
7/16	1.23	2 45	3.67	4.9	6.12	7.34	8.57	9.79	12.25	14.7	17.13	19.58
6	1.25	2.5	3.75	5.	6.25	7.5	8.75	10.	12.5	15.	17.5	20.
1/16	1.27	2.55	3.83	5.1	6.39	7.66	8.93	10.2	12.77	15.3	17.85	20.42
1/8	1.3	2.6	3.91	5.2	6.51	7.81	9.11	10.42	13 02	15.62	18 23	20.83
3/16	1.32	2.66	3.98	5.31	6 64	7.97	9.3	10.63	13.29	15.93	18.6	21.25
1/4	1.35	2 7	4.06	5.41	6.77	8 13	9.48	10.83	13.53	16.25	18.97	21.65
5/16	1.38	2.76	4.14	5 52	6.91	8.29	9.67	11.03	13.81	16 57	19 33	22.08
3/8	1.4	2 81	4.22	5.62	7.03	8.44	9.84	11.25	14.05	16.87	19.7	22.5
7/16	1.43	2.86	4.3	5.73	7 16	8-59	10.02	11.45	14.32	17.19	20.03	22.92
7	1.46	2.92	4.37	5.83	7.29	8.75	10,2	11.65	14.59	17.5	20.42	23.33
1/16	1.51	3.02	4.53	6.04	7.55	9.07	10.59	12.09	15.1	18.13	21.15	24.15
1/8	1.56	3.12	4.69	6.25	7.81	9.37	10.93	12.5	15.62	18.73	21.85	25.
3/16	1.61	3.23	4.84	6.46	8.07	9.69	11.31	12.92	16.15	19.39	22.62	25 83
8	1.67	3.33	5.	6.67	8.33	10.	11.66	13.33	16.65	20.	23.33	26.65
1/16	1.72	3.43	5.16	6.87	8.6	10.3	12.03	13.75	17.18	20.6	24.05	27.5
1/8	1.77	3.54	5.32	7.08	8.85	10.63	12.4	14.17	17.7	21.25	24.8	28.33
3/16	1.82	3.65	5.47	7.29	9.11	10.94	12.76	14.58	18.23	21.89	25.52	29.17
9	1.87	3.75	5.62	7.5	9.37	11.25	13.12	15.	18.75	22.5	26.23	30.
1/16	1.93	3.85	5 78	7.71	9.63	11.56	13.5	15.42	19.27	23.12	26.98	30.83
1/8	1.98	3.96	5.94	7.92	9.89	11.87	13.85	15.83	19.78	23.73	27.7	31.67
3/16	2.03	4.06	6.09	8.12	10.15	12.19	14.2	16.25	20.32	24.35	28.42	32.5
10	2.08	4.17	6.25	8.33	10.4	12.5	14.59	16.65	20.82	25.	29.15	33.33
1/16	2.13	4.27	6.4	8.54	10.67	12.8	14.93	17.08	21.33	25.62	29.88	34.17
1/8	2.19	4.37	6.56	8.75	10.93	13.13	15-3	17.5	21.89	26.25	30.62	35.
3/16	2.24	4.48	6.72	8.96	11.20	13.43	15.67	17.92	22.4	26.85	31.33	35.83
11	2.29	4.58	6.87	9.16	11.45	13.75	16.03	18.33	22.9	27.5	32.08	36.65
1/16	2.34	4.69	7.03	9.37	11.72	14.06	16.4	18.75	23.43	28.12	32.8	37.5
1/8	2.39	4.79	7.18	9 58	11.97	14.37	16.75	19.15	23.93	28.73	33.52	38.33
3/16	2.45	4.89	7.34	9.79	12.25	14.69	17.13	19.59	24.49	29.35	34.25	39.15
12	2.5	5.	7.5	10.	12.5	15.	17.5	20.	25.	30.	35.	40.

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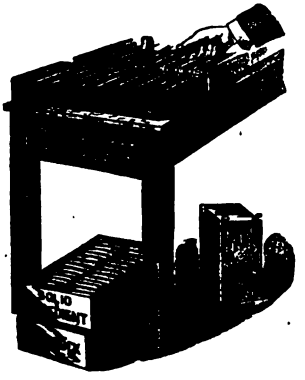
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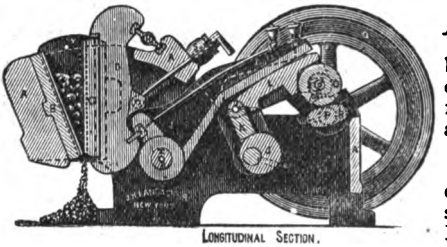
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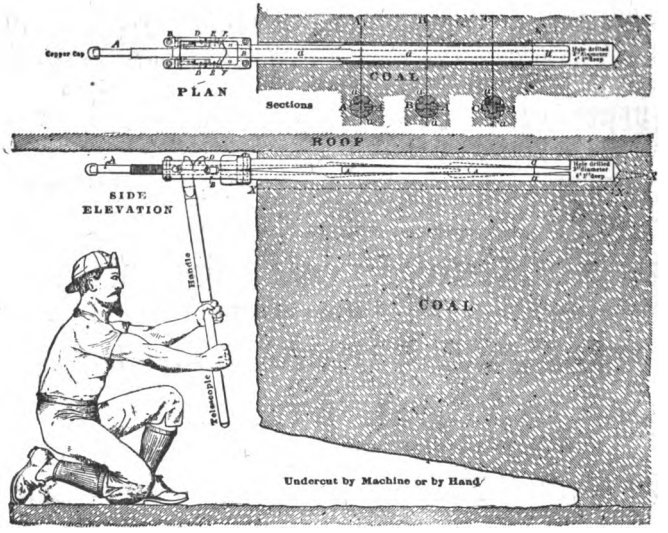
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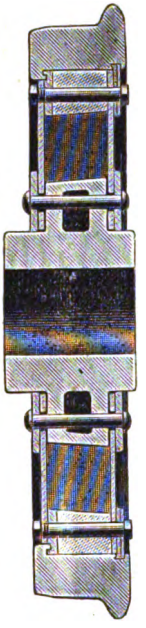
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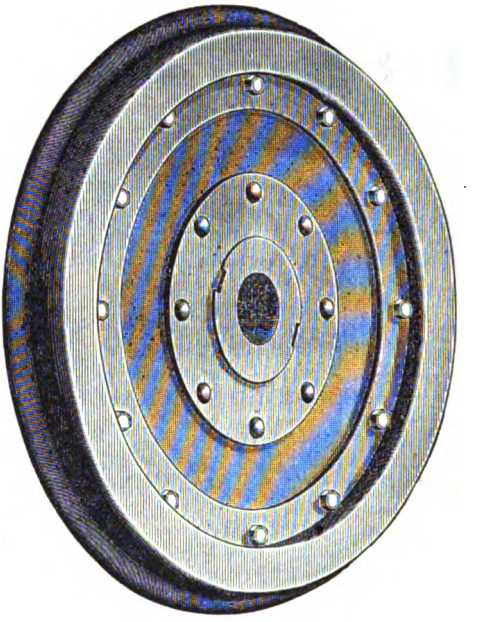
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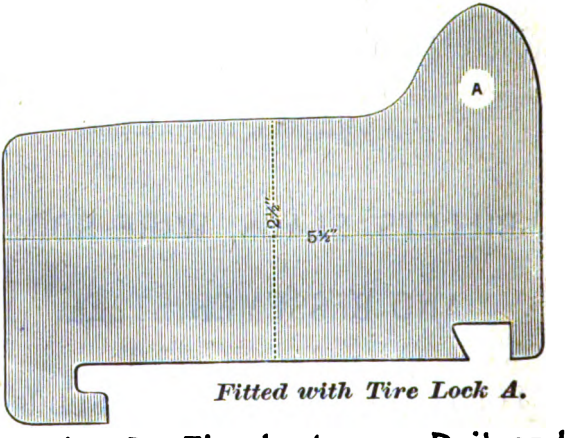
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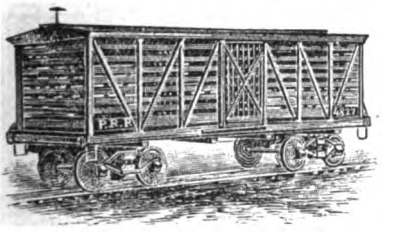
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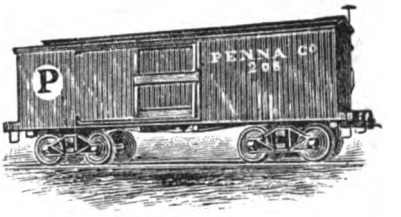
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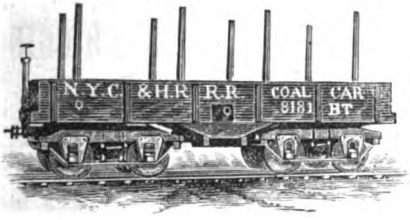


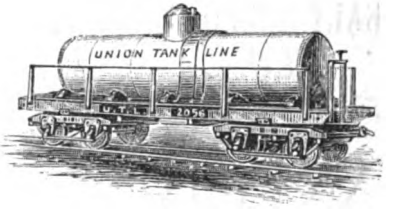


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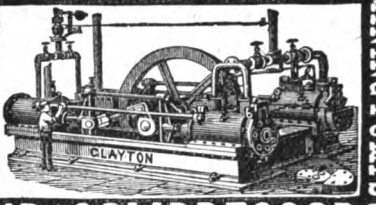
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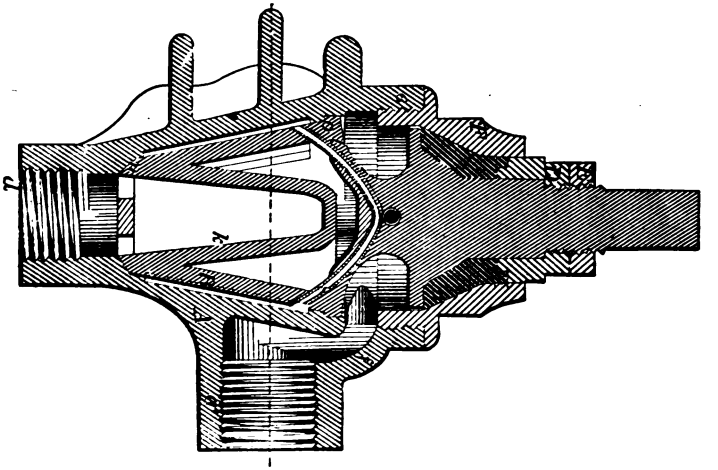


Fig. 1

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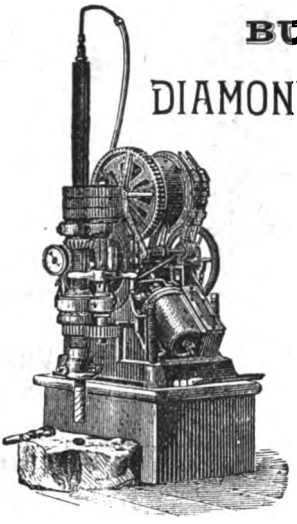
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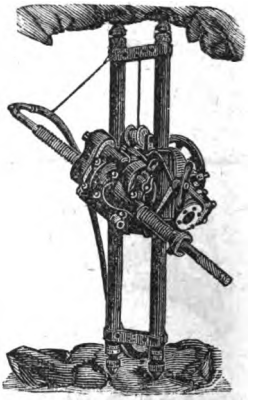
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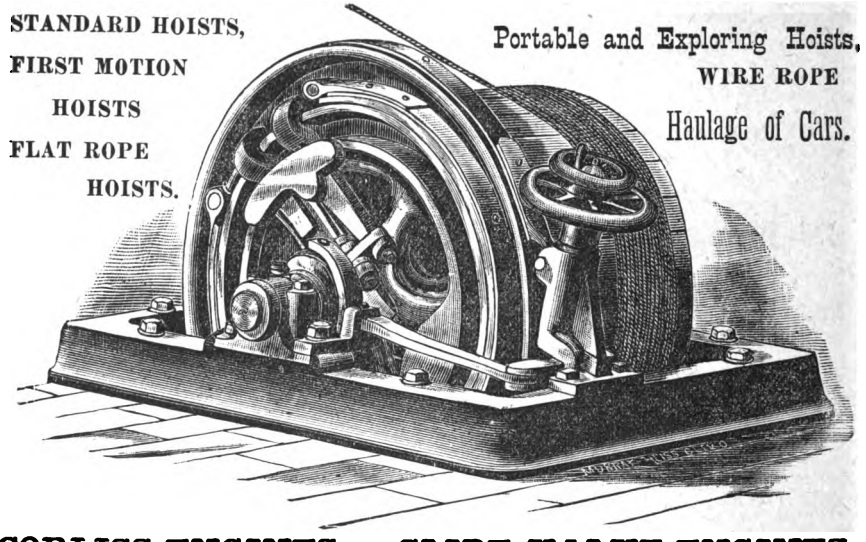


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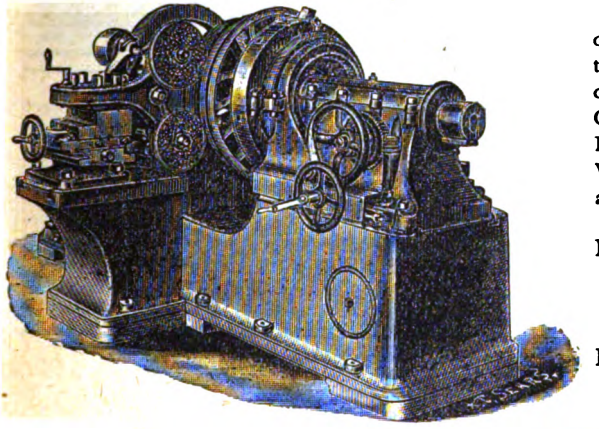
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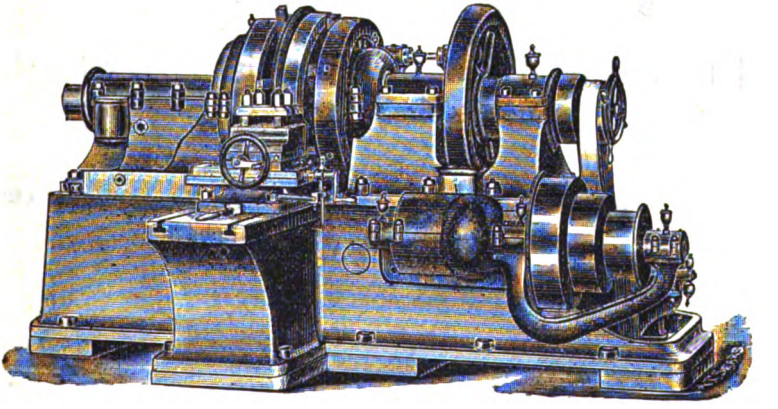


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Fig. 1. As used in Boring and Truing Chilled Wheels.

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Fig. 2.



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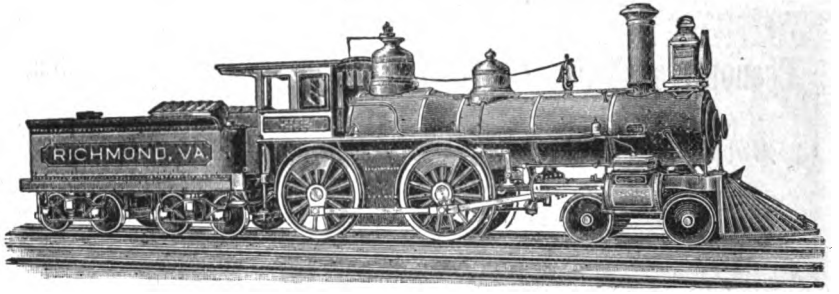
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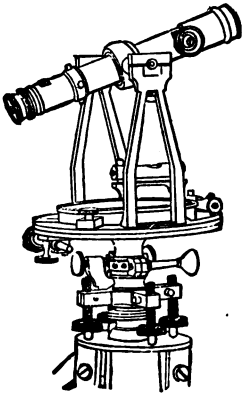
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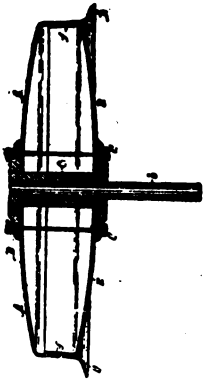


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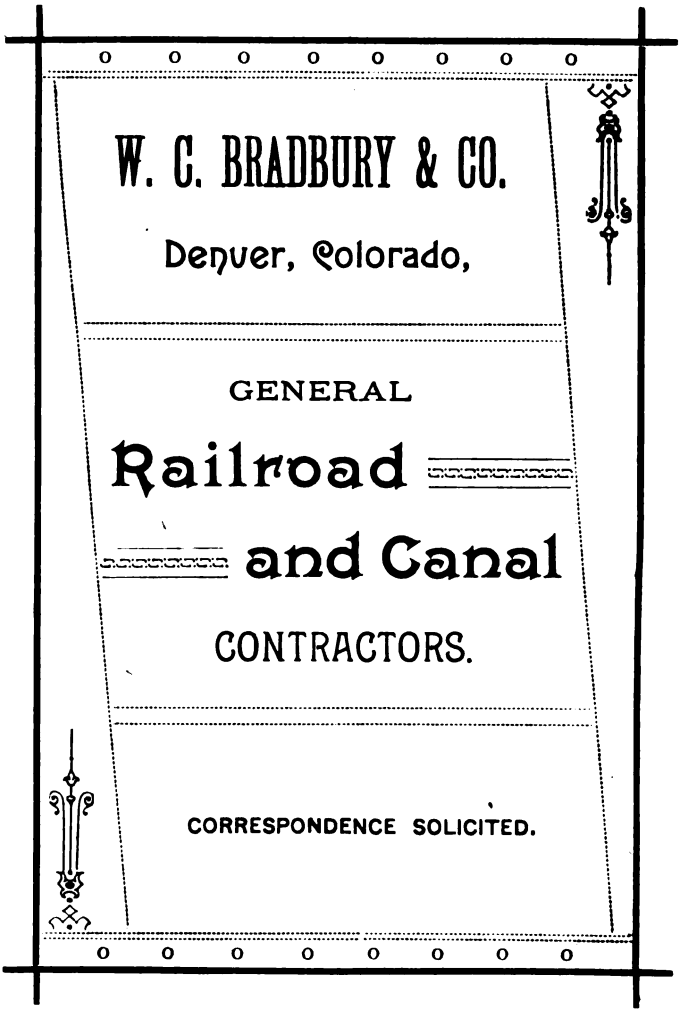
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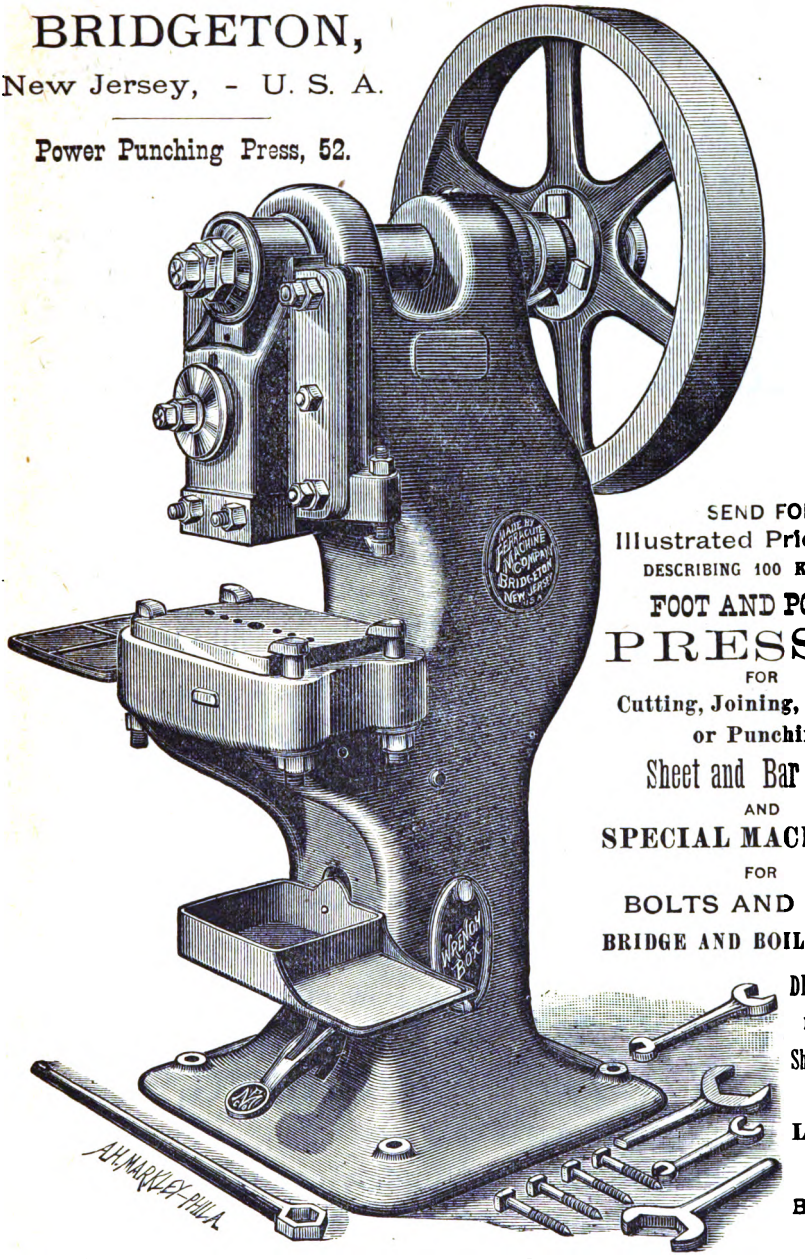
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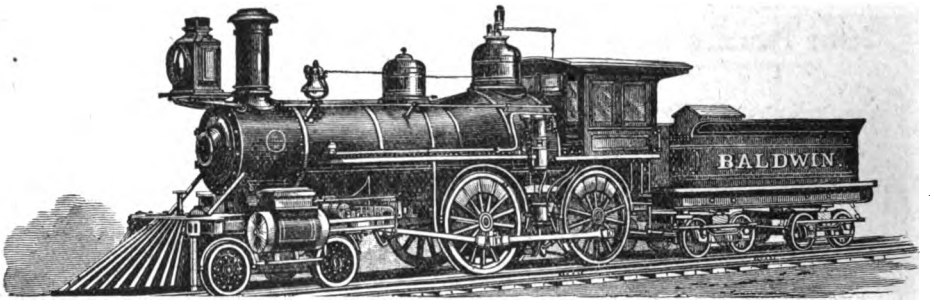
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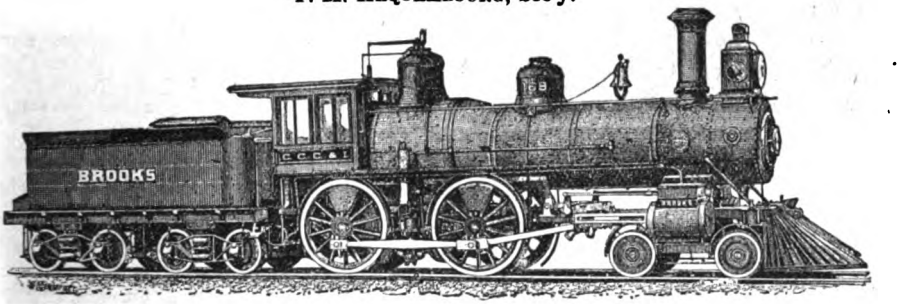
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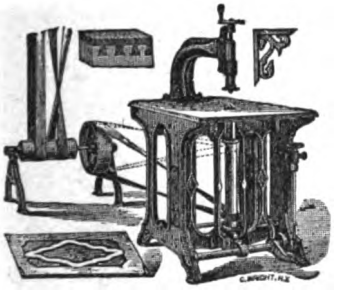
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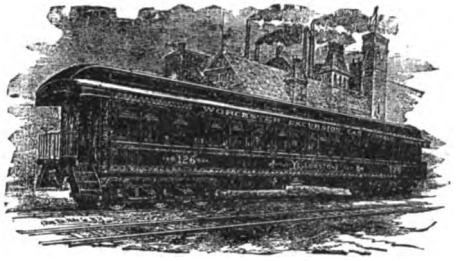
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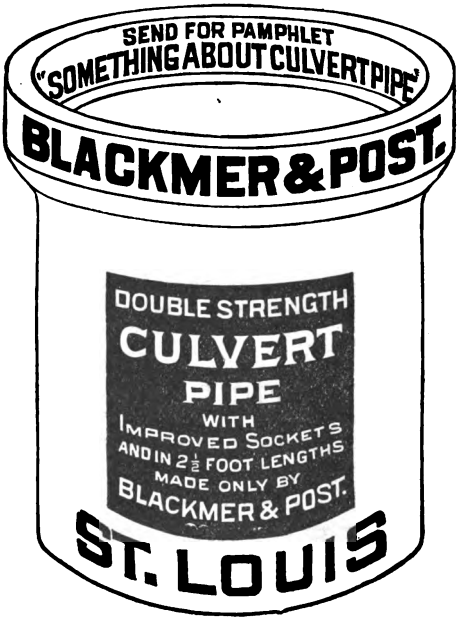
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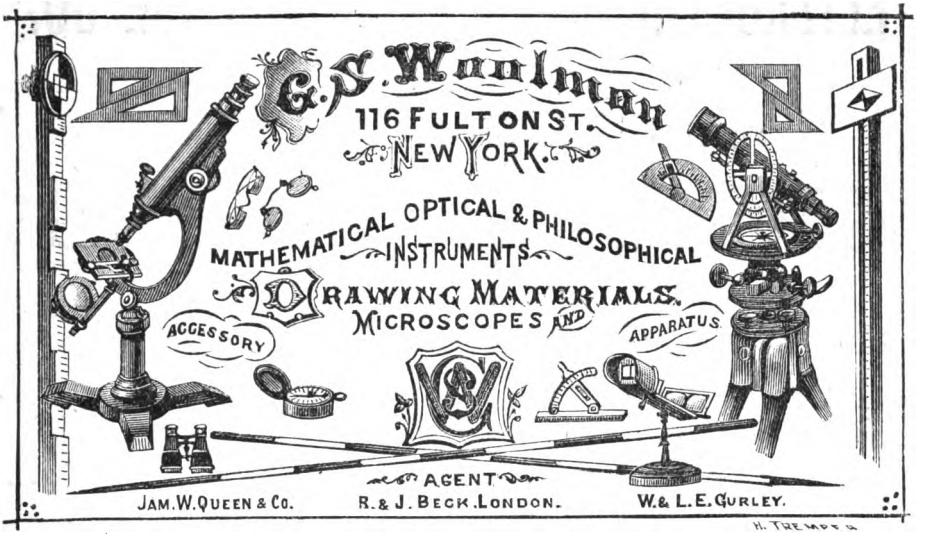
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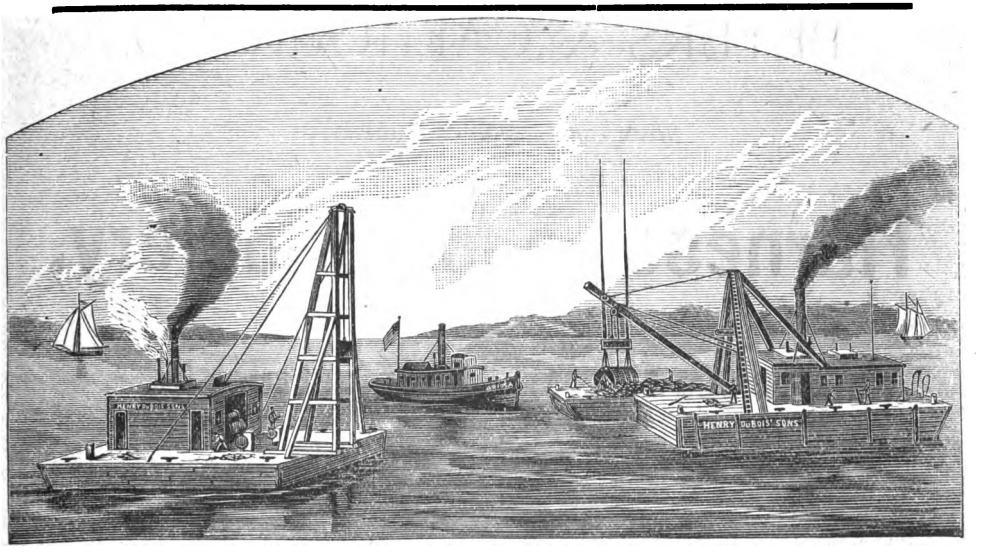
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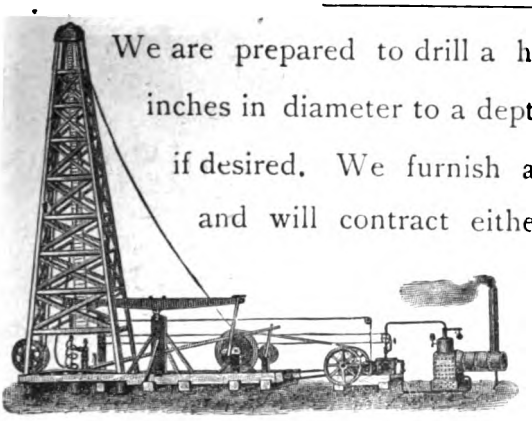
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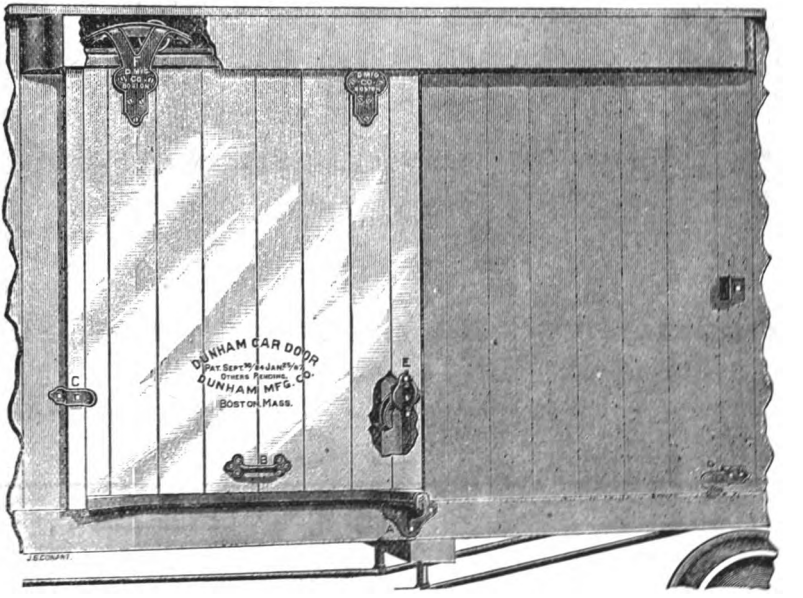
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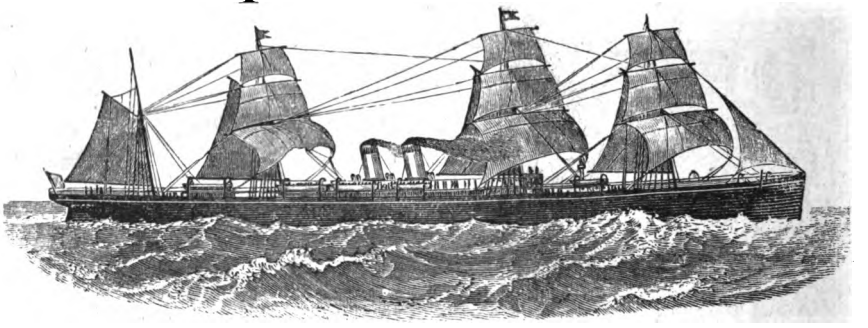
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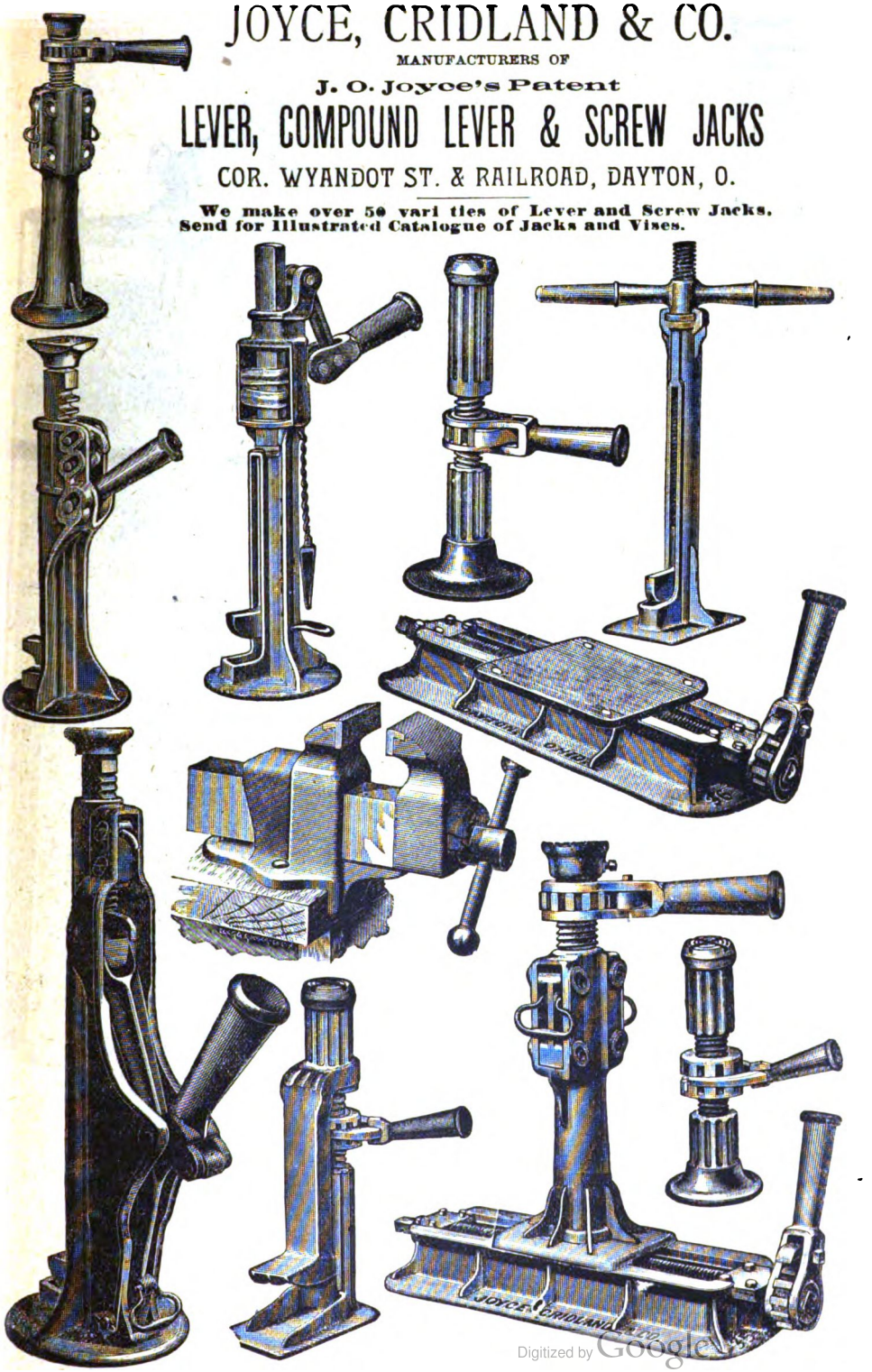
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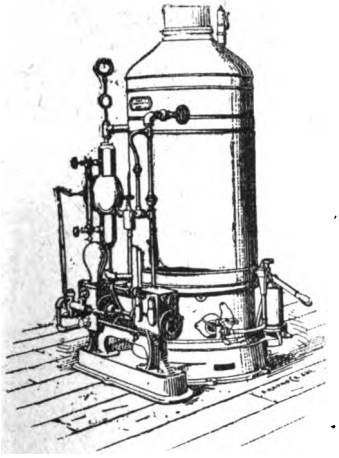


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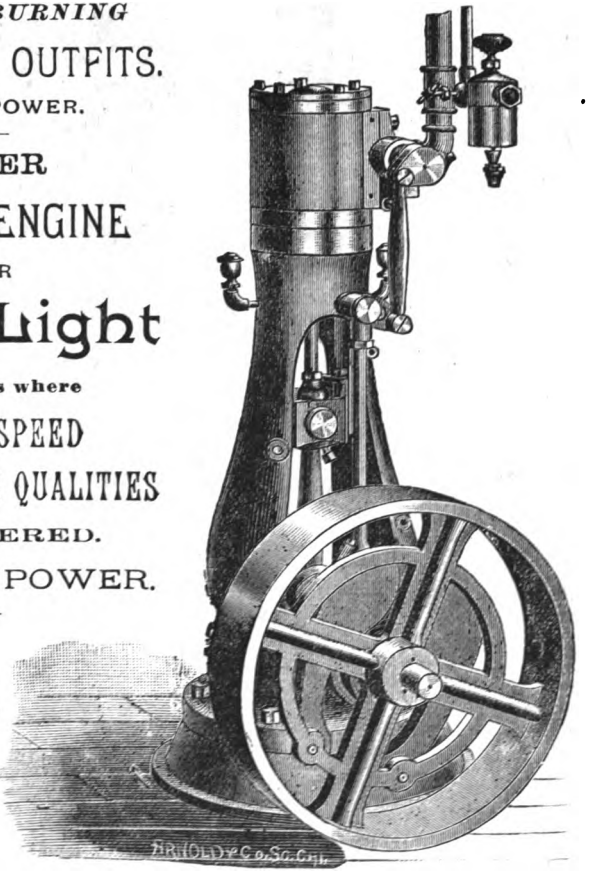
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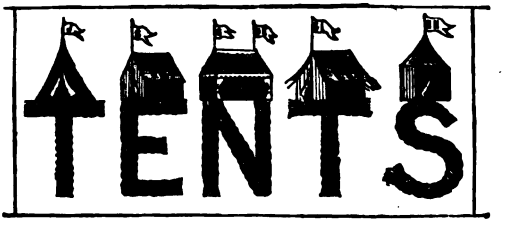
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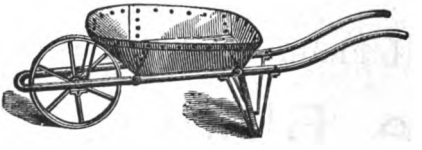
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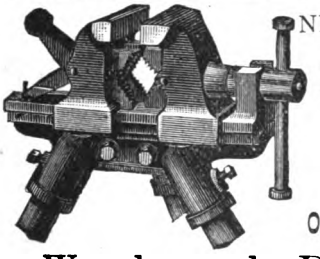


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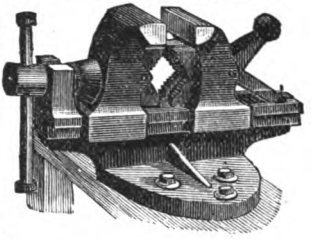


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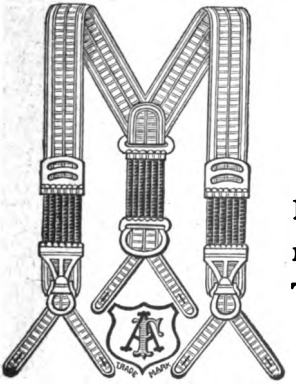
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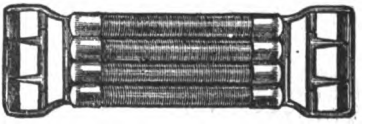
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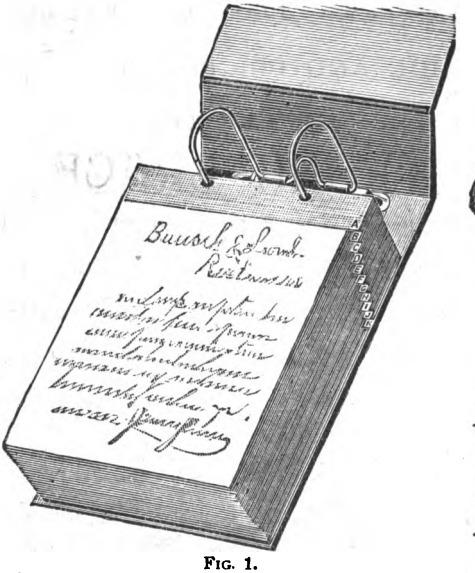


FIG. 1.
Cabinet Binding Case, No. 12, showing papers after being transferred.



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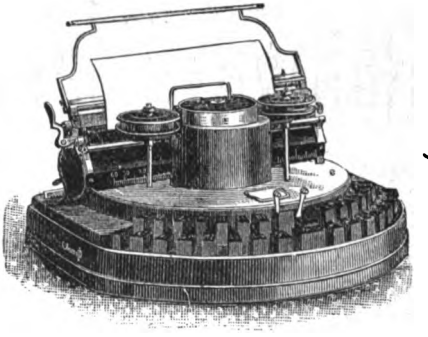
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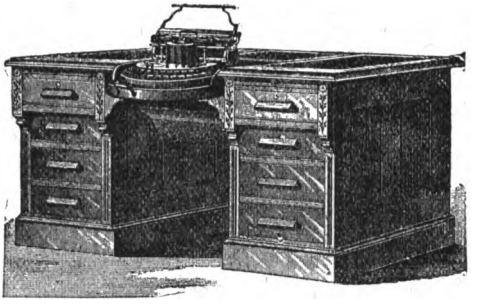
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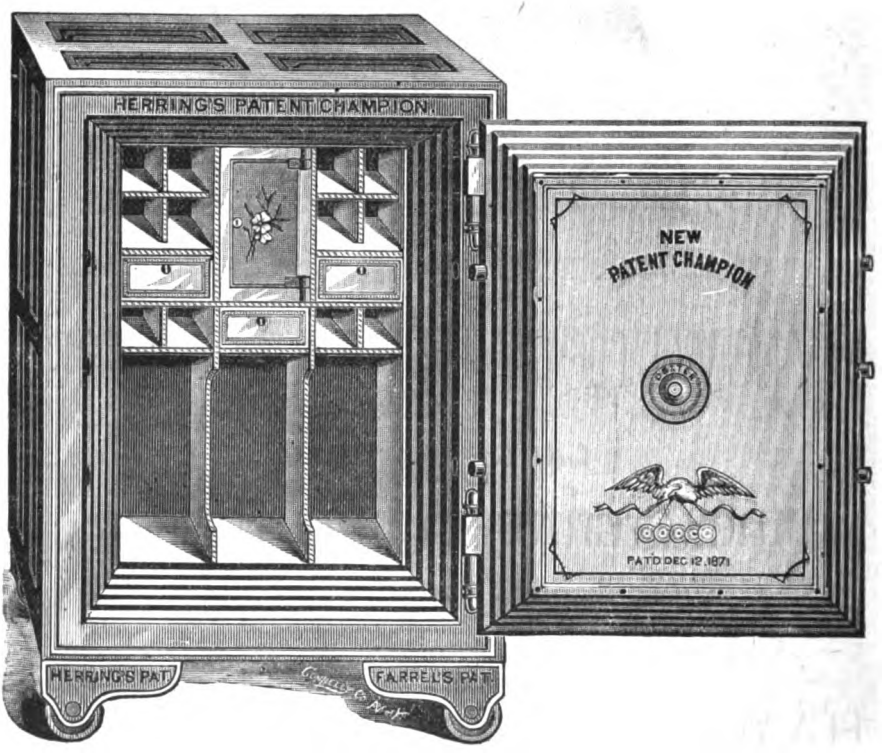
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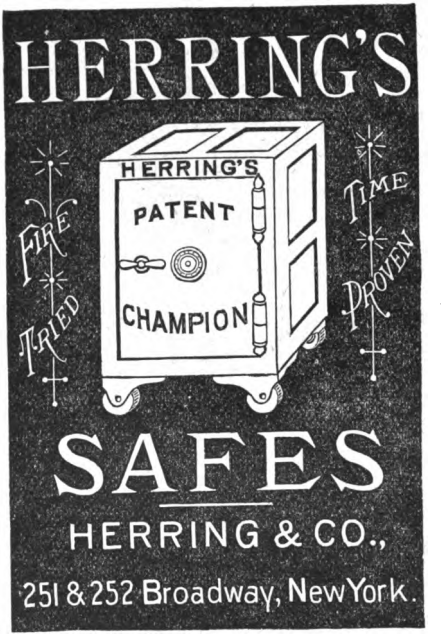
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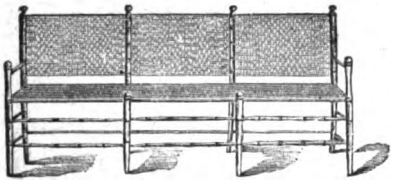
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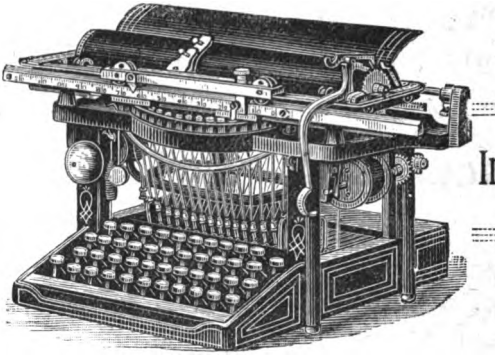
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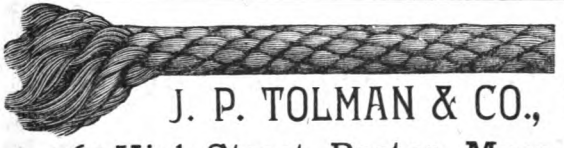
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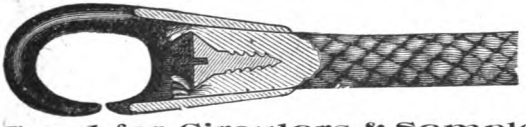
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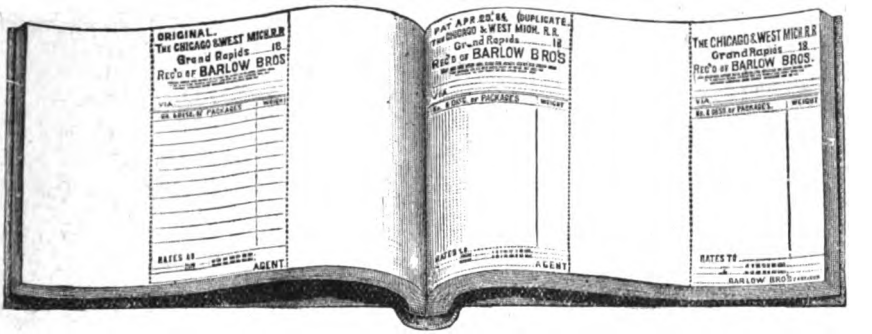
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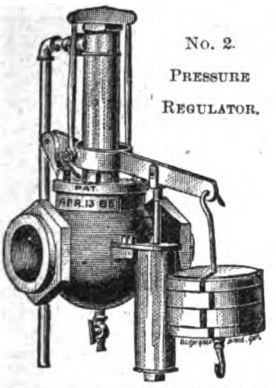
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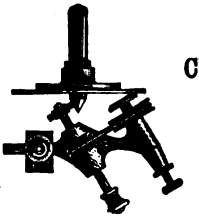
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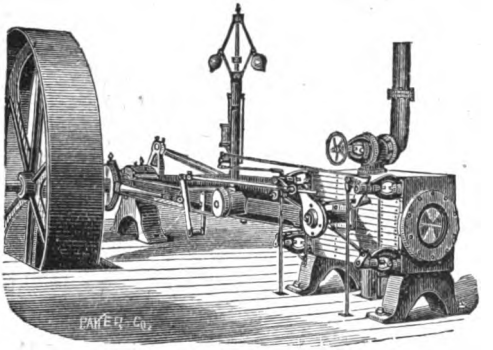
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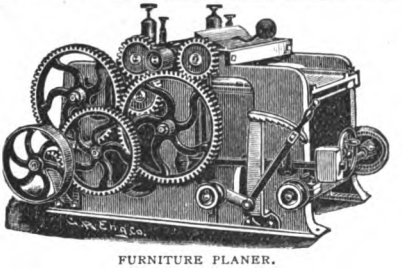
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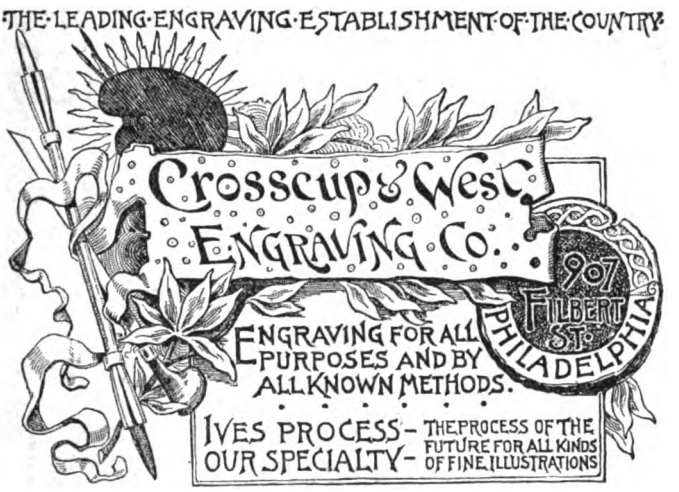
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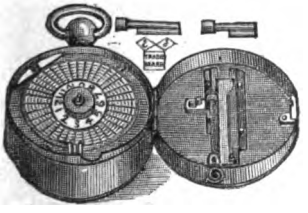
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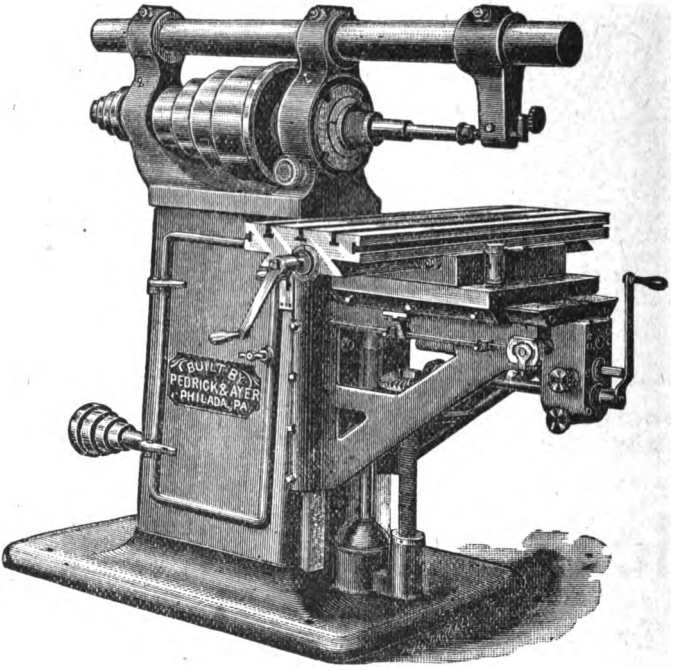
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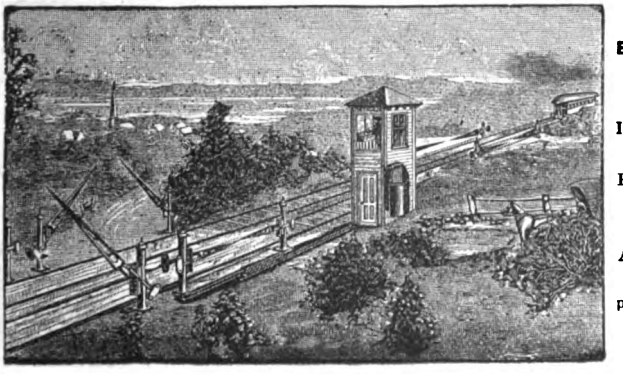
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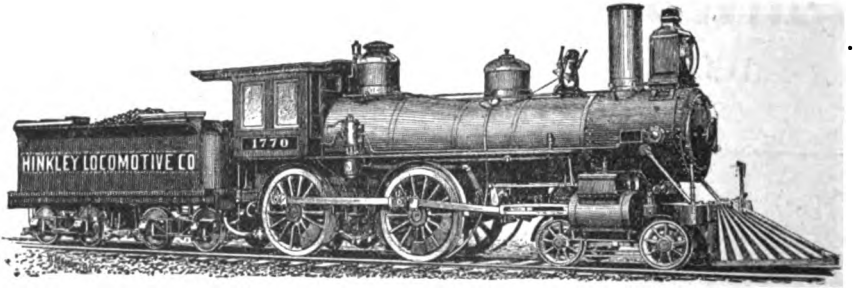
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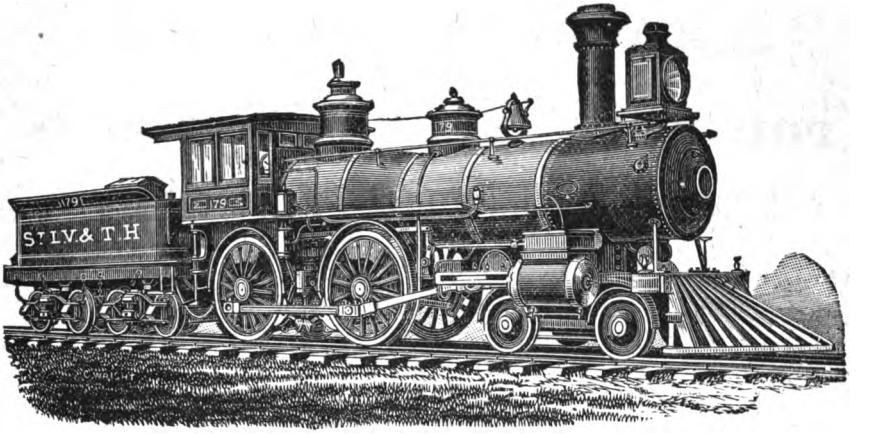
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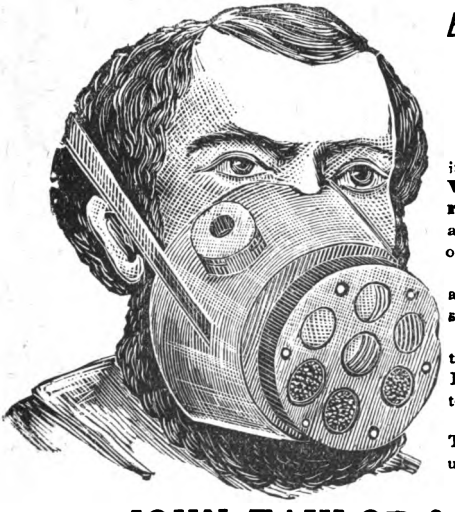
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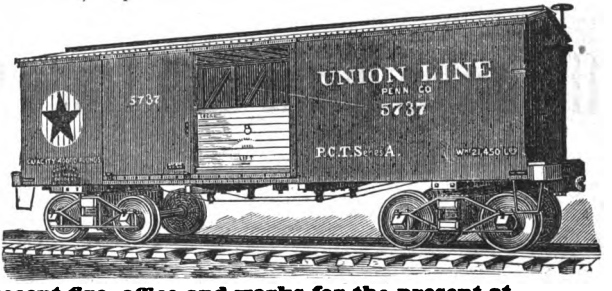
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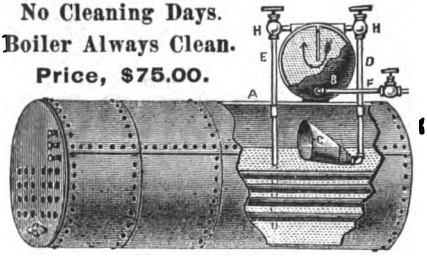
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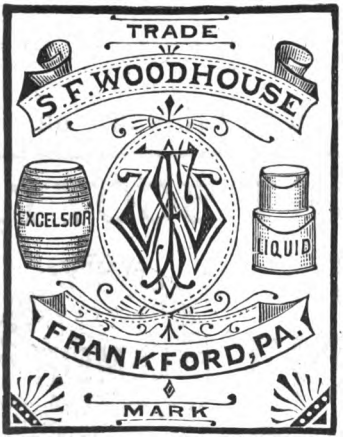
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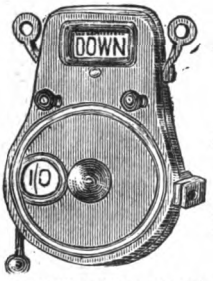
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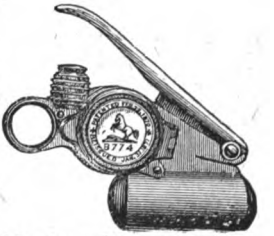
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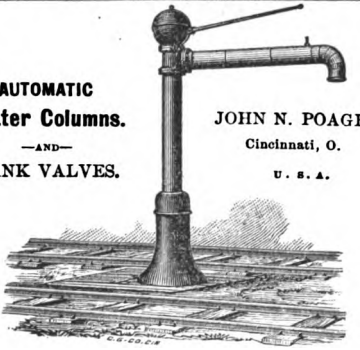
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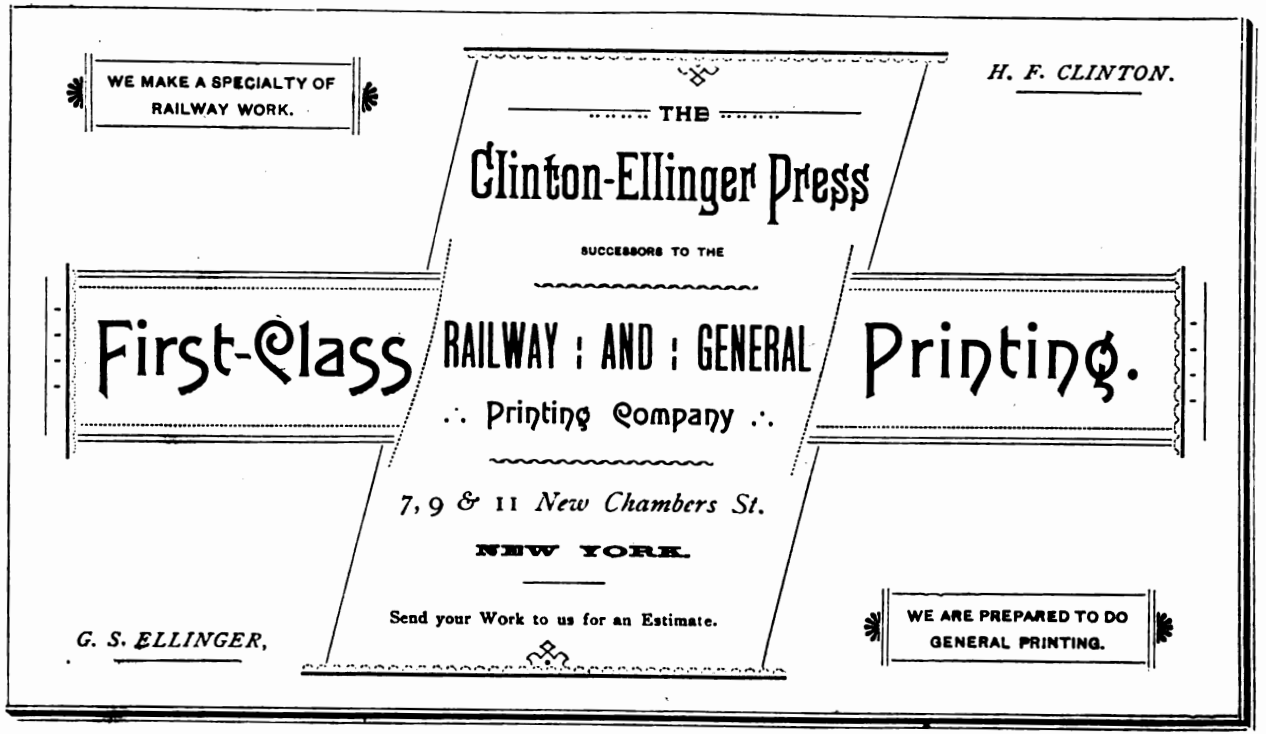
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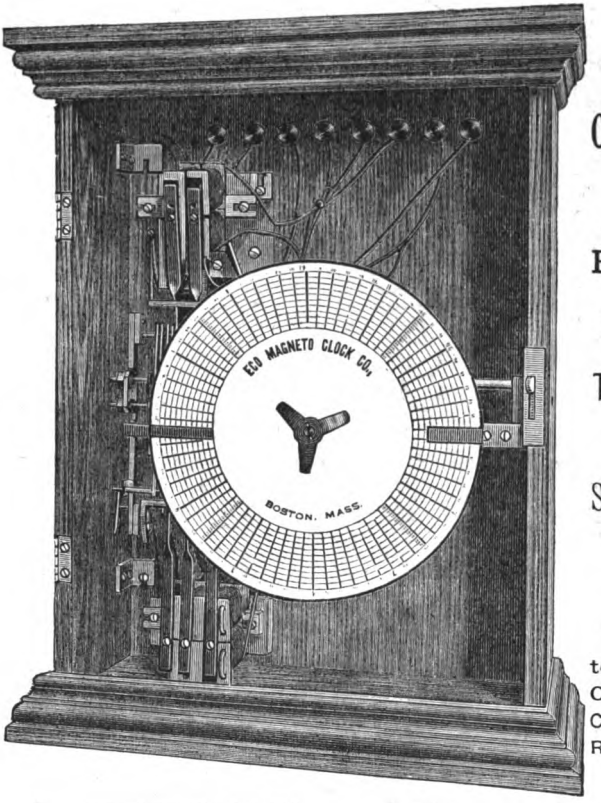
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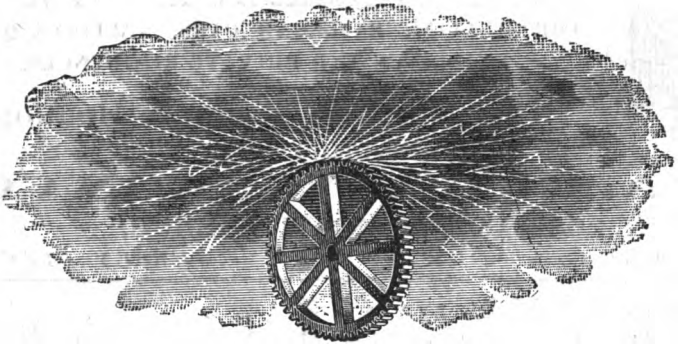
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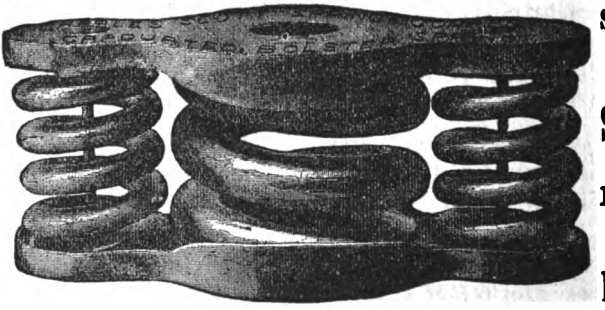
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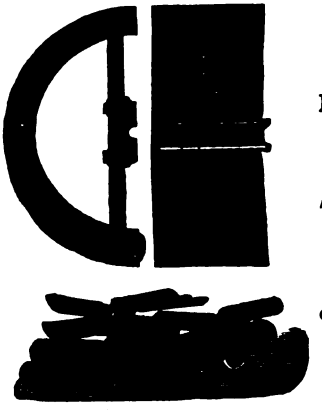
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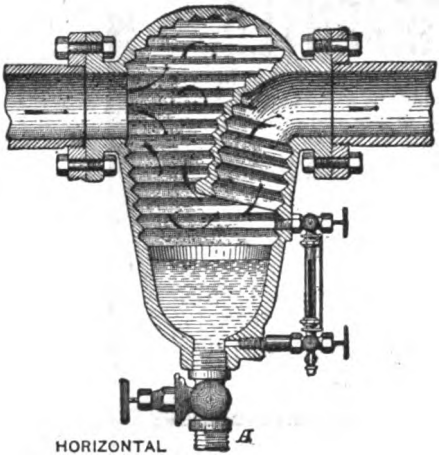
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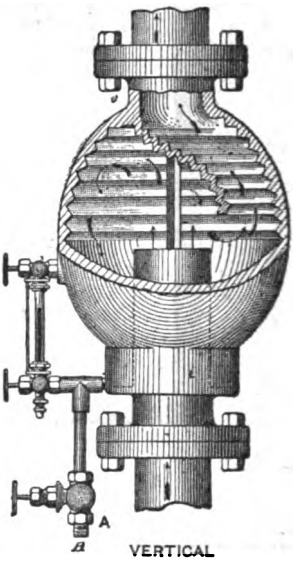
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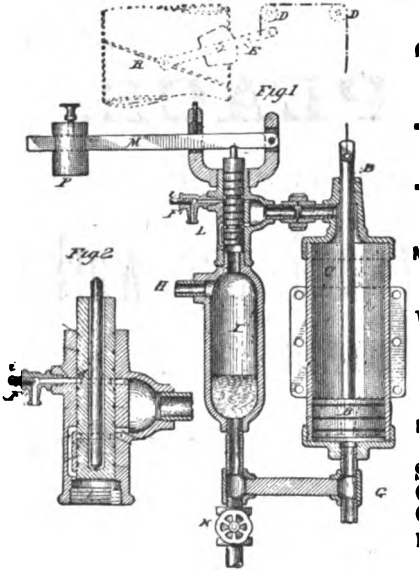
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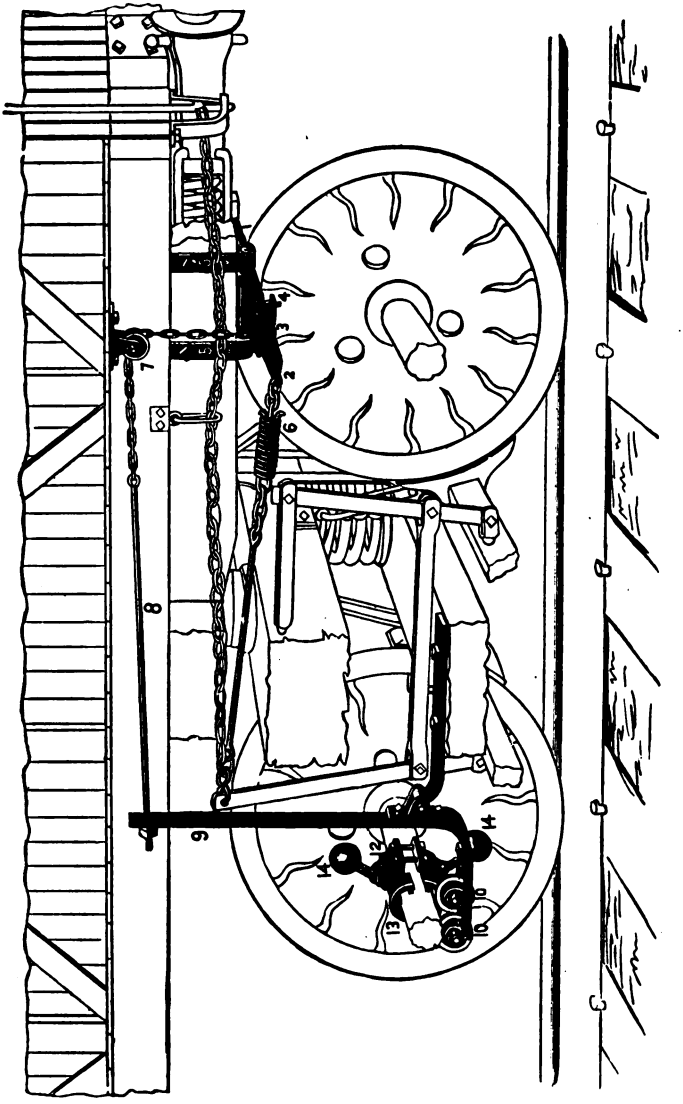
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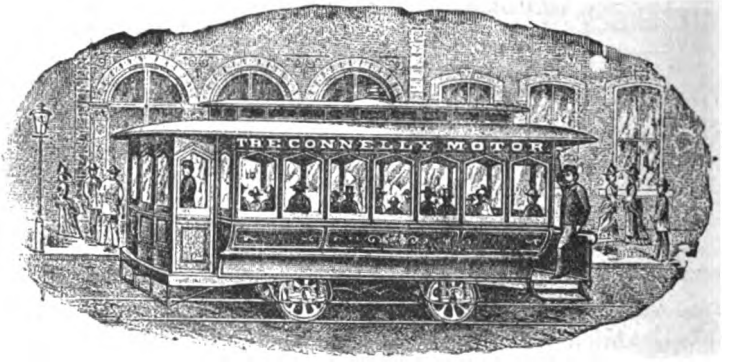
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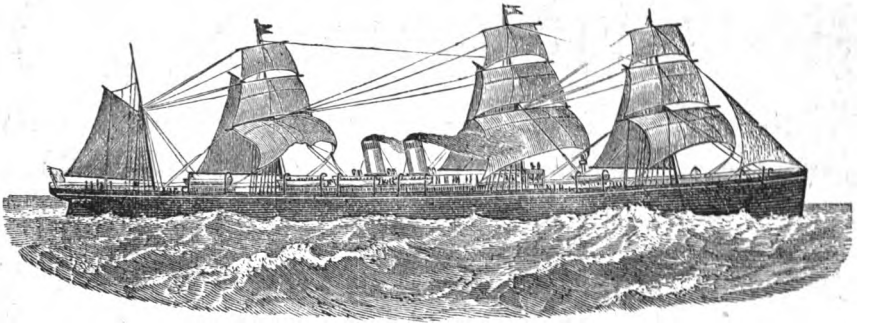
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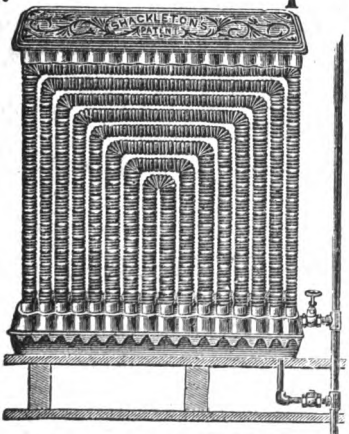
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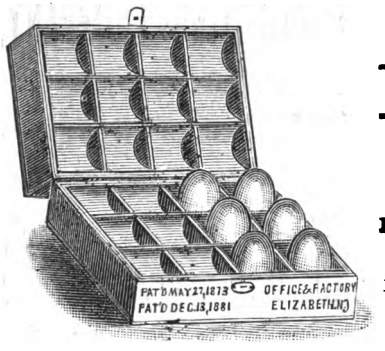
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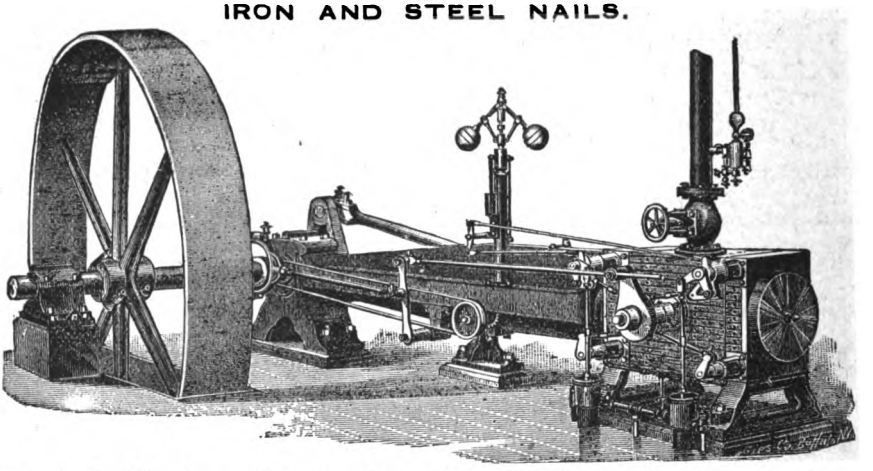
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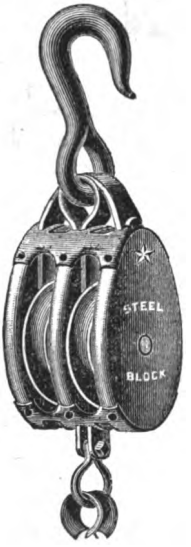
Successors to Bagnall & Loud Block Co., Penfield Block Co.

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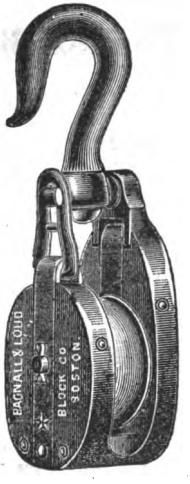
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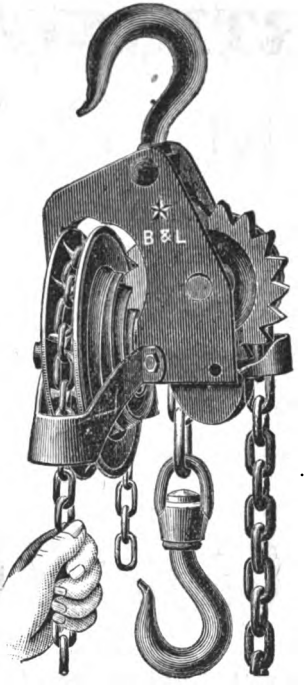
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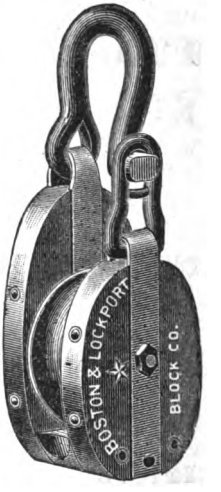


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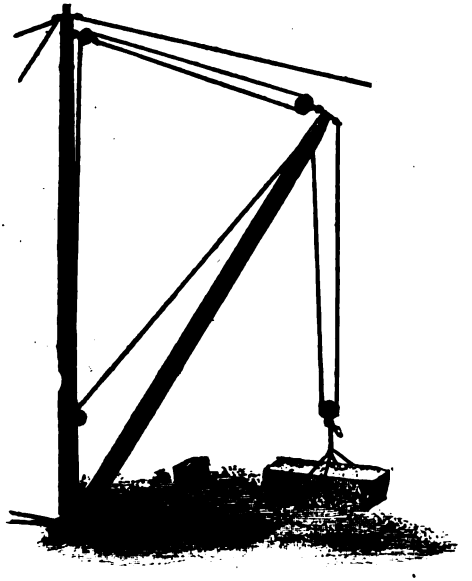
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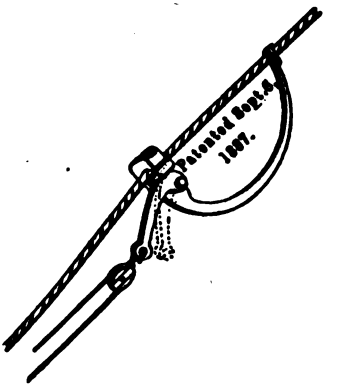
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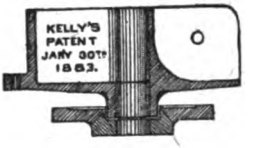
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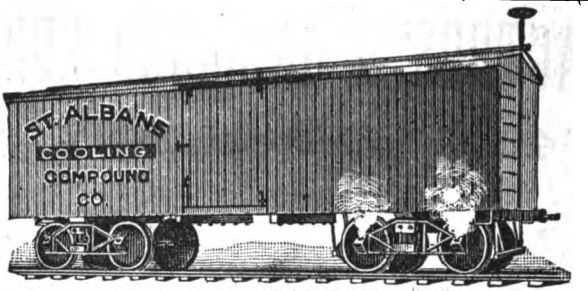
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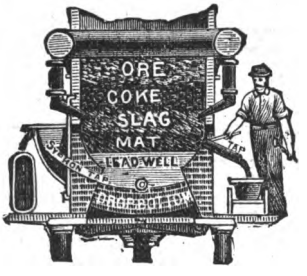
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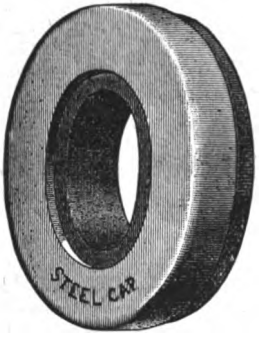
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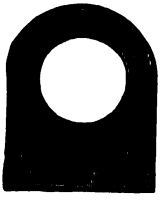
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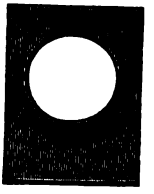
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